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Volume I. Overview

Connecticut Dept of Environmental Protection, Hartford

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Sep 75

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ECONOMIC LAW ENFORCEMENT

The Judges, (detail American woodcut, 19th Century)

VOLUME I

OVERVIEW

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CONNECTICUT ENFORCEMENT PROJECT

U. S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER, 1975

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→ The report describes a study on a

To Whom It May Concern:

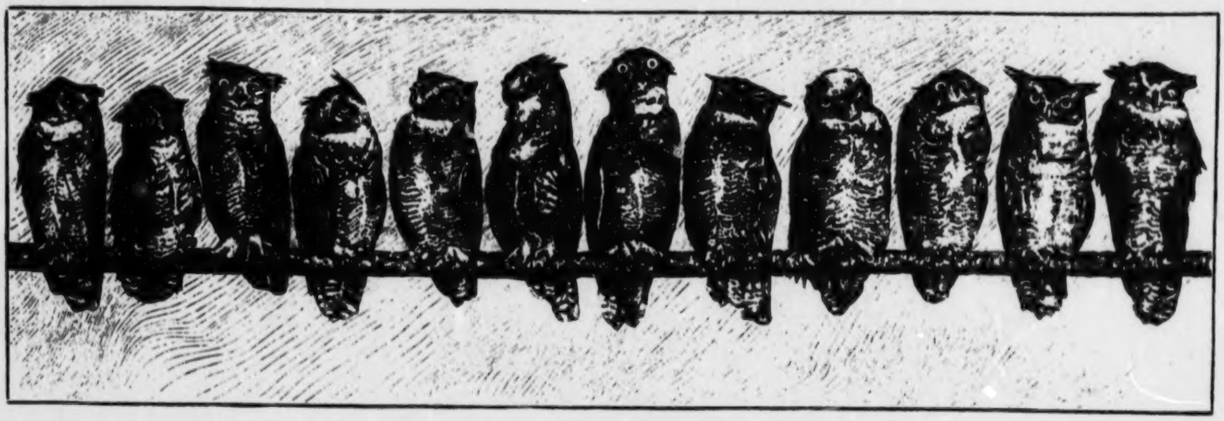
The accompanying four volumes are part of a six volume set entitled "Economic Law Enforcement" which has been prepared by the Connecticut Department of Environmental Protection. They describe a promising approach to the enforcement of environmental laws now being implemented and tested in Connecticut. Printing and editing problems have delayed Volumes III (Water Pollution) and VI (Legal Issues) and they will be forwarded as soon as they are completed. Fortunately each volume is a complete unit in itself.

The new approach, through the use of administratively imposed civil penalties, uses economic incentives that can be adjusted to meet different levels of resistance or cooperation. At most, the penalty to a violator would not exceed the cost of meeting his environmental requirements. It thus removes the economic advantage of deferring clean up activities without being unduly harsh.

Similar economic enforcement tools are either being considered or employed by Congress and several other states. While more experience is needed to prove their value, the possibility of increasing compliance with environmental laws at reduced cost and without the usual court delay deserves serious attention.

Very truly yours,

John A.S. McGlennon
Regional Administrator



The Judges (detail)
John Andrew and Son (after W. H. Drake)
American, 19th Century
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Courtesy Museum of Fine Arts, Boston, Ma.

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ECONOMIC LAW ENFORCEMENT

VOLUME I
OVERVIEW

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ECONOMIC

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THE CONNECTICUT ENFORCEMENT PROJECT

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PREFACE AND ACKNOWLEDGEMENTS

Those charged with administering the large number of environmental statutes enacted in the late 1960's and early 1970's quickly learned how essential effective, equitable law enforcement tools were. Without such tools they could not force the inevitable few recalcitrants to comply; and, as long as they could not do this, they could neither fairly demand nor reasonably expect others to comply voluntarily. Without general voluntary compliance, environmental goals would not be met and the regulators' administrative costs would soar.

Connecticut's Department of Environmental Protection realized in 1972, its first year of operation, that its enforcement responsibilities far outstripped the tools available to it. The Department created a special task force to think through and design the tools it needed; and the General Assembly, after considering and debating these recommendations at length, enacted the Environmental Enforcement Act of 1973 authorizing the Department to use the tools suggested by the task force. The U.S. Environmental Protection Agency, recognizing the value of the proposed approach as a model that would help other environmental agencies, funded the substantial work required to develop and implement this new system in Connecticut. The Connecticut Enforcement Project (CEP), a task force of consultants and members of the Department, was given responsibility for the design and implementation of this work.

As is typically the case with any significant social innovation, the development and introduction of this new approach to enforcement required the work and active support of many people. Three Commissioners of both parties have been involved. Dan Lufkin saw the need for effective enforcement and realized the limitations of the existing tools. He gathered the resources to develop the initial ideas, supported them, and saw them through to legislative enactment. Douglas Costle helped define the enforcement problem and the new approach, gathered together the funds and people to turn the legislation into a working program, carefully reviewed the proposed program personally, and launched the first regulations. Joseph Gill, who succeeded Douglas Costle in 1975, reviewed the program afresh and saw its program development work through to completion.

Other members of the Department's top management under these different Administrations played key roles. Eckhardt C. Beck supervised and supported the CEP's work closely as Deputy Commissioner in the Costle Administration; John Curry, Special Advisor to Commissioner Gill and a true professional who has served Connecticut since the Great Depression, immediately knew the right questions to ask and, along with Deputy Commissioner

Melvin Schneidermeyer, contributed critically to the program's implementation.

Henry Beal, the Department's Director of Air Compliance in the Costle and Gill Administrations and earlier a lawyer in that Unit, has always had an especially close relationship with the Enforcement Project. He was one of the three-person task force that initially analyzed what was needed and that drafted the Enforcement Act. His Unit bore the brunt of being the first to install the new tools, and he and his staff worked long and hard to make sure they were fully thought through.

Henry Beal's chief associates in Air Compliance Enforcement, Gerald Brodsky and James Vickery, contributed a great deal of their considerable skill, their time and energy, and their patience. In particular, James Vickery did or supervised almost all of the engineering work required, notably including the development and verification of the cost curves used to determine economically accurate assessments.

The CEP is indebted to a great many others in and out of the Department: Theodore B. Bampton, Deputy Commissioner; Robert Taylor, C. Zell Steever, and Ralph Adkins, Program and Administrative Directors; and Mary Ann Callihan, Doreen Dryer, Michael Harder (who did the engineering work for the Water Compliance Sub-Project), James Murphy, Beverly Mockus and the many other members of the Department who helped us and tolerated our many demands; Kenneth Willis, who provided offices for six months while the State Public Works Department could do nothing; Charles McKinney and the staff of the Coastal Area Management program, for generous help during the Project's last months; the distinguished members of the Connecticut bar who reviewed the Project's work so carefully as pro bono members of the Project's Legal Advisory Council; the many outside economists, management experts, and legal scholars who reviewed our work, notably including Professors William Baumol of Princeton, Ralph Brown and Marvin Chirelstein of Yale Law School, Andrew Gold of Trinity College, Henry Hansmann of Pennsylvania Law School, Daniel Saks of Michigan State University, Thomas Nelson of the University of Connecticut Law School, Richard Stewart of Harvard Law School, Daryl Wycoff of Harvard Business School, and Richard Zeckhauser of Harvard's Kennedy School; Russell Brenemann, one of Connecticut's leading environmental lawyers, who offered wise advice throughout the Project; the Connecticut Business and Industry Association and other members of the State's business community who studied the proposed regulations closely and worked with the Project staff to define and strengthen them; and Connecticut's public interest, conservation, and environmental groups who also studied and strengthened the program and who provided it with critical support.

David Tundermann, Assistant Commissioner for Legal and Governmental Affairs from the time the Department was established until March, 1975, and now a member of the staff of the President's Council on Environmental Quality, was the person charged with primary responsibility for the program within the Department. He brought the original task force that prepared the initial draft of the Enforcement Act of 1973 together, represented the Department before the General Assembly as it considered these proposals, and then prepared the funding proposal submitted to the U.S. Environmental Protection Agency. Once the CEP was created, he represented the Department on the Project. He helped develop the program ultimately adopted, introduce the Project's proposals in and outside the Department, run political and administrative interference, and supervise such research work, chiefly regarding legal problems, as his substantial on-going commitments as Assistant Commissioner allowed. After he left the Department and before joining the Council on Environmental Quality, he assumed responsibility for finishing the design and for helping the Department begin to implement the operating and maintenance sub-project.

William Drayton, a lawyer, economist, and management consultant with McKinsey and Company, conceived many of the innovations embodied in the Connecticut approach and was responsible for managing the CEP staff. Drawing on prior consulting experience and his special interest in the design of regulatory and incentive systems, he conceived, among other ideas, of the use of capital budgeting economics as a standard for remedy-setting, of the approach's gradually escalating multi-step response to noncompliance, and of the flexible reserve escrow device. He was a member of the original task force that formulated the Enforcement Act; he drafted the Section 602/603 regulations, which served as the prototype for most of the CEP's other regulations; he helped guide and quality control the work of other members of the project; and he either wrote, rewrote, or edited all of this final report. Temporarily on leave from McKinsey, he is currently a visiting professor at Stanford Law School.

Donald J. Gogel helped manage the Project during its early and middle stages, surviving a commute from Harvard Law School for most of this period to do so. In addition to helping with overall program development and implementation, he was responsible for managing the development and implementation of the prototype CEP program in the Air Compliance Unit. Phillip Reed had lead responsibility for developing the CEP program for the Water Compliance Unit, and he assumed many of the general management responsibilities Donald Gogel had to give up when he left the Project to take up prior commitments in California.

The other members of the CEP staff (and their chief areas of responsibility) were Douglas Bateson (Air Compliance and managing production of the final report), Sandee Blechman (Water Compliance), David Bognar (graphics), Peter Connolly (Water Resources), Fred Dennehy (legal), Deborah Fillion (graphics), Philip Florkoski (programming and Air Compliance), Sandi Foley

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ECONOMIC LAW ENFORCEMENT

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AN INTRODUCTION TO
CONNECTICUT'S ECONOMIC APPROACH
TO
ENVIRONMENTAL LAW ENFORCEMENT

AN INTRODUCTION TO CONNECTICUT'S ECONOMIC APPROACH TO ENVIRONMENTAL LAW ENFORCEMENT

Connecticut's Department of Environmental Protection is now implementing a new economic approach to enforcement. Several of the innovations Connecticut is demonstrating are likely to have significant value for other enforcement programs -- in and out of the environmental field. The Connecticut model

- provides an economic standard - how much a violator has saved by not coming into compliance - for determining remedies that are
  - just large enough to provide effective incentives
  - no larger than the unjust enrichment violators realize from noncompliance
  - fitted case by case to (1) the size of the savings from noncompliance and (2) the duration of the period of noncompliance
  - practicably useable because based on clearly defined, readily measurable criteria and therefore (1) objective, not discretionary, and (2) demonstrably equitable
  - easy and inexpensive to administer
- allows program administrators to avoid having to choose between the two extreme and generally ineffective responses to noncompliance typically now available -- jawboning/extending orders (no real bite) and going to court (costly, slow, and uncertain); it provides an inbetween series of quick, low-cost responses with escalating economic impact.

This economic approach to enforcement has been a success so far. The first few cases to become subject to this new approach, all companies with outstanding histories of noncompliance, experienced dramatic performance turn-arounds. The Department obtained these results simply by sending a warning letter accompanied by a clear explanation of what liability for continued noncompliance would be. No assessments were necessary. This early experience confirms Connecticut's expectation that its economic enforcement approach will not only greatly speed compliance, but that it will achieve significant reductions both in the number of cases requiring enforcement action and in the administrative cost required per case.

The Department's new enforcement program has won broad public support and, probably more important, business acceptance. Academic experts, the press, and Connecticut's environmental and public interest groups supported the program strongly. The Connecticut business community, after close scrutiny, has not opposed this strengthening of environmental law enforcement even though it has opposed (and successfully blocked) other Department programs during the same period. The equity of the program and the fact that it is based on familiar, basic business economics both contributed to this acceptance. So did the realization that taxing away the savings of noncompliance would protect the law-abiding majority of companies from the unfair competitive advantage now enjoyed by scofflaws.

This volume provides a brief, summary overview of the work of the Connecticut Enforcement Project (CEP). It begins by explaining how Connecticut's two major innovations, economic remedies and a wide range of effective administrative responses short of going to court, work. It then summarizes the application of these tools: it reviews the enforcement problems that led to their development; it describes how they have been fitted to the particular problems of the Department's Air, Water Compliance, and Water Resources (coastal filling, wetlands, etc.) programs; and it outlines how they can be used to enable environmental regulators to get a handle on the generation of enforcement problems they are now having to spend more and more time confronting -- ensuring that the control facilities installed with such effort and cost in recent years are properly operated and maintained. This volume concludes with several brief attachments: a copy of the relevant provisions of the Enforcement Act; copies of representative CEP regulations; a summary of the economics used in calculating economic remedies; and some of the most important testimony submitted in writing at the time of the initial CEP Public Hearings, supplemented by several pages of representative press comment.

This summary volume is followed by five detailed back-up volumes: one each for the Air, Water Compliance, Water Resources, and Operating and Maintenance enforcement applications developed by the Project and a final, sixth volume that covers the legal analysis underlying the design of these programs.

ECONOMIC ENFORCEMENT: TWO CRITICAL TOOLS

The Connecticut Enforcement Project has developed two innovations that could have wide application both within the Department of Environmental Protection and beyond: economic remedies and a series of gradually escalating responses to noncompliance that have economic bite but that do not require going to court.

ECONOMIC REMEDIES

Regulation is typically required when the public decides that a class of persons must do something that those people otherwise would not do because they feel it is not in their economic interest. Very few of the people who make asphalt would install baghouses (huge filters) on their batching plants unless required to do so. Such an investment may well cost $50,000 and then require $13,500 a year to operate and maintain. For this expenditure the batching company gets no revenue whatever; it does not recoup its costs, let alone make a profit. Naturally, the company would much prefer to spend its money on a profit-making project. This preference is the source of most enforcement problems.

Economic remedies remove the economic incentive to delay or to avoid compliance. They do so by, in effect, guaranteeing that those who comply will achieve a return on their investment equal to the return they could achieve on an equal cost commercial investment. This guaranteed return is the saving of not having to pay the economic assessments imposed by the State for noncompliance. For every month that the asphalt batching company does not install a baghouse, it becomes liable to an economic assessment equal to the value of that month's delay, roughly $1666.

This charge is calculated using the same formula that businessmen use to evaluate alternative investment opportunities, the capital budgeting formula. The costs of the project are estimated year by year over the project's life; these estimates are adjusted for taxes and inflation; the resulting year-by-year expenditure figures are then brought to a present value; and, finally, a flat, monthly rate that will amortize the costs of the project (including lost profits at the industry's average cost of capital rate) is determined. (Attachment C gives a full explanation, illustrated by several examples, of these calculations and their underlying mathematics.)

Such economic assessments are not effluent charges. They accept the regulatory framework set forth in existing State and Federal law -- that performance standards are set by legislation or regulation and that sources are required to comply with those standards. Their objective is to remove the powerful economic incentives that now work to discourage regulatees from complying. While this approach to regulation is not the approach economists would ideally prefer (because it forces sources to invest without regard to the particular costs and benefits of their doing so), it is both (1) practical and easily understood, and (2) the law. And, in any case, there is generally a rough correlation between the size of a source's impact on the environment and what it must pay to lessen this impact to conform to publicly legislated standards.

The remedies calculated by the economic assessment formula do more than neutralize existing disincentives to compliance; they make compliance sufficiently attractive that the economically rational businessman will want to comply -- promptly. They make compliance a good business investment because an investment in abatement ensures complying companies savings (not having to pay these assessments) as great as the income generated from an equal cost, attractively profitable investment. In other words, companies that comply are guaranteed a double-negative rate of return on abatement investments equal to the rate of return they are obtaining on investments they have recently chosen to make. (In fact, the return on their investment in abatement is much more secure than the usual commercial investment; a monthly payment due the government is not subject to changes in market conditions, consumer tastes, or the host of other risks associated with commercial investments.)

Economic remedies are fitted to the facts of each case. The larger the benefits of noncompliance are, the larger the assessment will be. Similarly, the longer the delay in coming into compliance, the larger the forfeiture becomes. In other words, any enforcement system whose incentives are calculated according to this sort of economic criteria can be sure its incentives will always be just large enough to make compliance pay.

Using such criteria will also ensure that the size of such incentives will not be unfair or excessive. Economic remedies will always be just large enough to take away the economic benefits of noncompliance and no larger.

Remedies That Are Useable Because Equitable and Objective

Statute books bristle with an impressive array of penalties for environmental infractions. They are, however, actually employed rarely, and then only in a limited and erratic manner. There are several basic reasons:

- Available remedies are generally too severe and, consequently,they are not used.
    - Injunctions are rare; enforced injunctions even more so. Administrators, prosecutors, and the courts are all reluctant to force plants to close given the attendant severe economic losses to the owners, their workers, and local tax revenue.
    - Remedies that carry with them a criminal stigma also seem excessive in environmental cases, and both prosecutors and courts consequently shy away from their use.

- * The laws that authorize these huge penalties almost never provide clear and practically useable criteria for determining individual assessments. This lack of guidance presents prosecutors and courts with a dilemma, especially in technically complex environmental suits, that they are often ill-prepared to handle and that they consequently either try to avoid or that they handle with great, often excessive caution.

Tying assessments to an economic standard should overcome most of these inhibitions. Connecticut's economic remedies are, as we have seen, just big enough to ensure the legislature's regulatory objectives will be achieved, and no bigger. They entirely avoid the massive secondary effects of the injunction. They merely tax away the benefits noncomplying firms have appropriated to themselves by ignoring the law. Removing these benefits has the useful additional effect of protecting complying competitors from being put at an unfair disadvantage. Although the economic criteria for calculating incentives that Connecticut uses in its civil assessments can be used in setting criminal as well as civil remedies, they fit especially well with the rapidly developing use of civil penalties; and, to the extent they are used with civil assessments, would have no criminal stigma.

The size of the economic remedy is likely to be accurate in fact as well as in theory. Connecticut guarantees those subject to its economic civil assessments a right to a correction hearing after they have come into compliance and can present vouchers to document actual costs. Since the costs used to calculate the assessments are easily measurable, and in fact are generally already routinely measured and recorded by most businesses, it will be easy for those subject to regulation successfully to challenge overassessments should they occur. Any such overassessment would be refunded with interest at the same cost of capital rate used to calculate the assessment in the first place.

Administrators and courts consequently should have sufficient confidence in the grounds for, and the reliability of, economic remedies to be willing to use them promptly when needed.

Administratively Useable Remedies

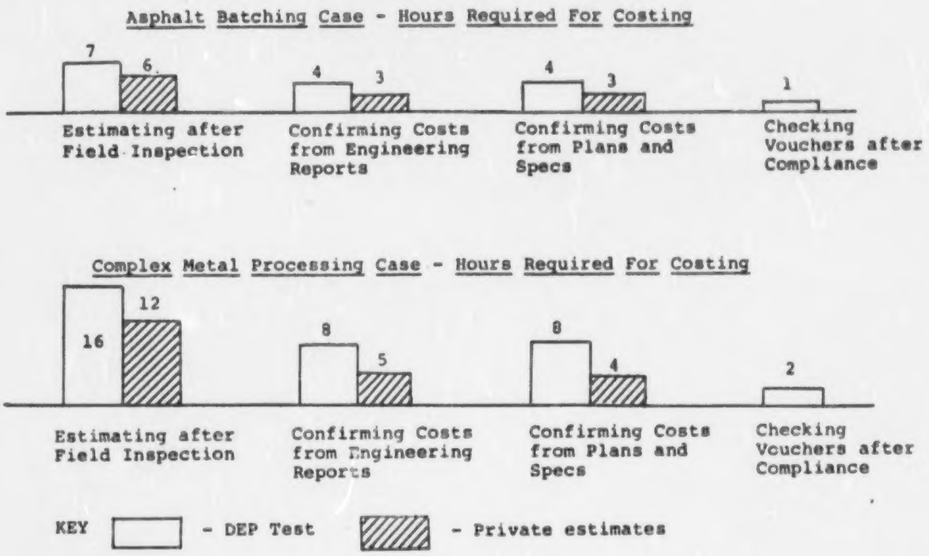
How hard will it be to determine what the correct economic remedy should be? This is a critical question because, if it is too difficult, neither enforcement officials nor the courts will use economic remedies -- no matter how much confidence they have in the approach. Existing staffs must be able to make this economic approach work easily, without having to undergo extensive training.

Shortly after it came into being, CEP tested how long it would take Air Compliance engineers to make accurate cost estimates.

Engineers were given actual case files and asked to estimate within 20 percent accuracy what it would cost the source to come into compliance, specifically breaking out installed equipment costs and expected annual operating and maintenance expenditures. Some cases were relatively simple, others complex. Some folders had only the materials that would be available after an initial field inspection; others had all the materials that were in the folder at the time that either the engineering report or plans and specifications were submitted to the Department. In every case, CEP knew what the case's actual costs of compliance were and consequently was able to control for accuracy.

The results of the test were most encouraging. Department engineers demonstrated that they could make accurate estimates of the costs of compliance in anywhere from one to sixteen hours (depending on the complexity of the case and whether or not engineering work done by the source was in the case file). (A survey of private consulting engineers in Connecticut confirmed the results of this test. The private engineers consistently required somewhat less time to make their estimates than did the DEP staff, probably because they have to estimate costs for their clients regularly whereas Department engineers are not otherwise required to make cost estimates.)

Without Special Training or Aids, DEP Air Compliance Engineers Were Able to Estimate Costs Accurately in 1 to 16 Hours per Case



In other words, if nothing was done to simplify the Department's job, it would take five hours to estimate the costs of compliance accurately in the typical Air Compliance case. Other steps, chiefly determining the appropriate cost of capital and executing a series of calculations by hand, could take another two hours. As long as increased voluntary compliance makes it necessary to impose economic assessments in only a limited number of cases per year, this administrative burden would probably be acceptable.

The CEP has developed a series of tools that cut the time required by 80-90 percent:

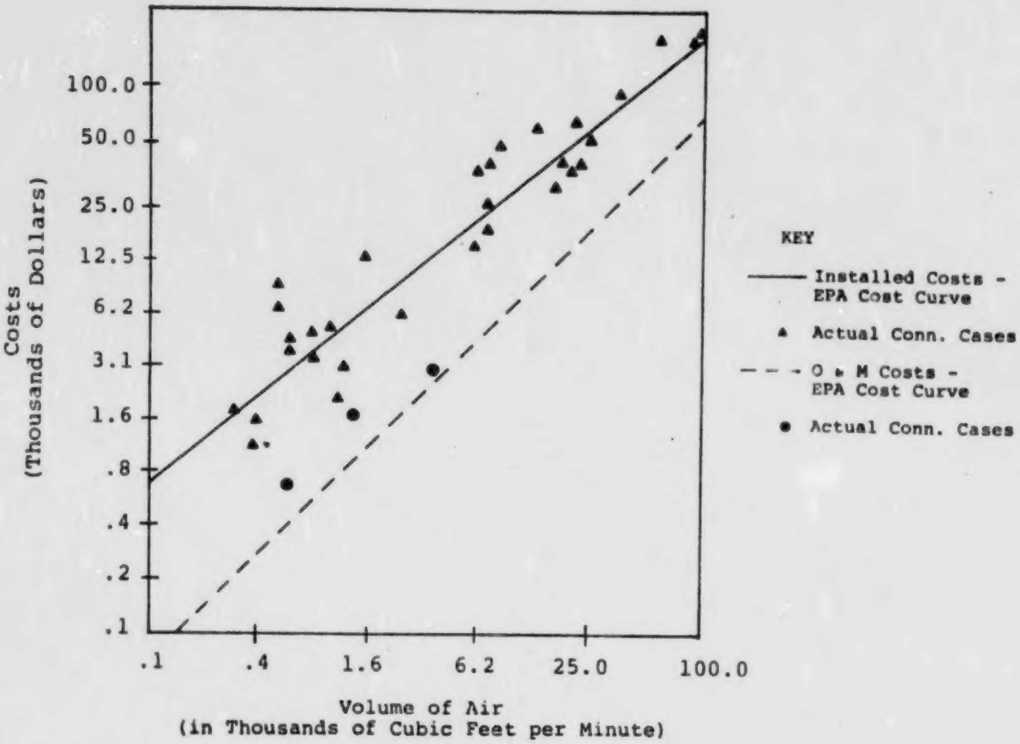
* Estimating the costs of compliance, which would otherwise take five hours, has been reduced to the simple step of reading reliable estimates from one or more cost curves, a process that requires only 10-20 minutes.

* Determining the cost of capital and other necessary bits and pieces of information has similarly been reduced to the quick and simple task of consulting a few tables.

* Translating these bits of cost information into a measure of the economic benefits of noncompliance and thus the assessment is done with a simple mathematical program useable on a simple desk calculator that automatically adjusts for the impact of taxes and inflation and that does all the calculating required in seconds.

Clearly, the first of these time-saving devices, the cost curves, is the most important. Starting from basic, known variables -- the flow rate of waste gas and the type of air pollution control equipment, or the flow and nature of water pollutant(s), Department staff need only identify the point on the relevant curves for any given flow rate in order to be able to read off a reliable cost estimate. Continuing the case of the asphalt batching company once again, the relevant cost curves for particulate control using baghouses (the appropriate control methodology for asphalt batchers) follows:

Particulate Control Costs - Baghouse



Source: EPA Publication AP-51, pp. 164, 175 (Dec. 1972); Connecticut Tax and Registration Forms.

Assume that a Department inspector has reported that the asphalt batcher's plant emits 20,000 cubic feet per minute of particulate-laden air that must be processed through control equipment. Reading up from this CFM level to the curves, a Department engineer would determine that the batching company would have to pay $50,000 for installed equipment costs and $13,500 per year in operating and maintenance expenses. These curves, originally developed by EPA, have been confirmed by actual Connecticut case experience, as the chart indicates. (A complete set of curves for most pollutants and control approaches in Air will be found in Part V of Volume II; Part III of Volume III, explains a similar time-saving method of estimating available for the Water Compliance program area.)

With these three aids, all an engineer need do to determine the right economic assessment for a particular case is (1) put the small tape cassette containing the assessment formula in a desk calculator, (2) type his estimates of the installed equipment costs, the annual operating and maintenance expense, and the cost of capital (read off the appropriate cost curves and tables) into the calculator, and (3) press the machine's "go" button. The calculator will produce the correct monthly charge after only a few seconds. The process is simple and quick. It can also be a useful negotiating aid. "And, now, Mr. Titanic, let's see how much we will have to charge you if you fall further behind your compliance schedule...."

With the exercise of a little care to avoid potential legal problems, using economic assessments can be simplified even further.

The initial test of the time it took Department staff to make reliable cost estimates demonstrated that delaying when the estimate has to be made (or defended) until after the source provides either detailed engineering information or actual expense vouchers can cut the amount of time required to a small fraction of what it would otherwise be. The Department's civil assessment regulations provide two ways the Department can avoid the extra, unnecessary administrative cost of having to make early costs of compliance estimates.

Probably the most important method is to: (1) make a rough, good-faith estimate, and (2) if the source feels the rough estimate is too high, leave the amount assessed unchanged but collect only what seems reasonable to the source until such later time as either the source comes into compliance and presents expense vouchers or sufficient information is available to make a quick estimate reasonably reliable. Connecticut's civil assessment regulations specifically give the Department discretion to collect the amounts assessed in whatever installments it thinks best.

The Connecticut regulations provide two further devices for avoiding a premature deadline for estimating the costs of compliance. The hearing officer can postpone any hearing regarding the accuracy of the Department's initial estimates for a reasonable period of time if he determines that information important to an accurate assessment is not available at the time but will become available later. The risk of court intervention in such cases is limited because the source is guaranteed (1) a special correction hearing at the time it comes into compliance and can present vouchers to document its actual costs and (2) that any overassessment will be repayed with interest. Within limits, courts are likely to defer to this available administrative remedy.

In sum, economic assessments can be used relatively easily and with very little administrative cost in most cases. There may be a small number of cases for which cost curves or other aids have not been developed and/or in which it may not be appropriate to delay making a detailed, final estimate of the costs of compliance. However, the cost of handling even these few cases, probably on average roughly a person-day, is manageable.

In any case, even after taking the added administrative costs of estimating and calculating economic remedies into account, Connecticut will experience major net administrative savings from the introduction of its economic enforcement system. These savings are discussed further in a few pages.

Using Economic Remedies

Economic assessments can be used to determine (1) the remedy requested of a court in a civil or criminal action, (2) the size of a bond, escrow, or other surety liability or forfeiture imposed, and/or (3) the amount of an administratively imposed civil penalty.

Economic remedies are much better suited to civil than criminal cases. They charge a delinquent source what the source has saved by not complying -- but no more. That is, economic remedies make no provision for punishment. (They might nonetheless still be useful in criminal cases as a means of establishing a "floor.") On the other hand, they provide exactly what is needed in a civil action: an exact measure of the incentive necessary to induce the source to take remedial action.

Further, economic remedies provide a missing element that should make widespread use of administratively-imposed civil, financial, incentives possible. Widespread use of economic remedies by regulatory agencies would be a major breakthrough in administrative law enforcement. Such a tool would allow agencies to assess scofflaws for whatever benefit they derive from delinquency with reasonable certainty and without delay. This effectiveness would cause much of the delinquency now experienced to disappear.

Now it is all too easy for the minority who actively seeks to avoid or delay compliance to do so. Despite a significant number of seriously delinquent cases, especially in the Water Compliance and Water Resources areas, since 1971 Connecticut's Department of Environmental Protection has been unable to get the courts to impose monetary penalties of any kind and able to get only five injunctions in any of the key enforcement areas.* The ease with which the recalcitrant minority are able to ignore the law, of course, has a direct impact on how many others comply voluntarily -- and to what degree and how quickly they do so.

Because administrative agencies have been seriously and persistently frustrated by this inability to respond surely and quickly to recalcitrants, they have pressed steadily for change. First they obtained a lessening of the barriers preventing their getting satisfaction in court by developing and rapidly expanding the use of civil penalties. However hopeful this lessening of the agencies' burden has been, their continued reliance on the courts and the lack of a clear, workable standard for setting penalties has left them still without a prompt and effective response to delinquency. Over the last several years, several jurisdictions have taken the logical and critical next step; they have authorized -- and their courts have upheld -- administrative imposition of civil assessments or surety requirements/forfeitures.

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* Includes only programs for which civil assessments are or will be effective.

Administrative imposition, even though legal and promising to be highly effective, carries with it a serious and troubling philosophic problem: is it fair to give the regulator the power to impose financial assessments on the regulatee? Does doing so make the regulator judge as well as prosecutor? Does it give the agency too much discretion?

Administratively-imposed surety requirements/forfeitures and civil penalties become much easier to accept, both philosophically and politically, once tied to the clear, objective standard provided by economic remedies. This standard ensures that no regulatee can face an assessment larger than the savings it has received as a result of noncompliance. It makes remedy-setting a ministerial task, well within the agency's technical capacity (and beyond that of the usual court). Without this standard, administrative imposition means the grant of extraordinary discretionary power to an agency; with it, the agency is limited to an appropriately administrative role and the regulatee is fully protected.

The Connecticut Legislature authorized the Department of Environmental Protection to impose civil penalties administratively, but insisted that it observe careful safeguards for the citizen in doing so. (A copy of the Enforcement Act of 1973 may be found in Attachment A at the back of this olume.) The Department's schedules of maximum assessments and requirements for setting individual assessments, both based on the economic remedies standard, meet this requirement.

AN INTERMEDIATE ENFORCEMENT RESPONSE

When a regulatee falls behind schedule or otherwise breaks the law, enforcement staffs now typically have only two ways of responding:

- They can cajole or attempt to bluff the regulatee. This jawboning approach generally entails repeatedly excusing past delinquency. For example, if a source has failed to comply with the terms of an order, enforcement staffs often "trade" an extension of the order's deadlines in return for a promise of future good behavior.

- Alternatively, enforcement staffs can attempt to obtain an injunction and/or a variety of penalties from the courts. This option entails considerable expense, great additional delay, and a very low probability of ultimately obtaining effective relief. Moreover, for the large number of small violations (such as failure to file periodic water pollution monitoring reports), resorting to such an expensive response would clearly be unreasonable.

This is an inadequate all-or-nothing choice. It gives regulators no means of providing foot-draggers and recalcitrants with a prompt, concrete incentive to comply.

What is needed is a series of in-between steps. These remedies must be more serious than an exhortation but less so than punitive fines or injunctions. They must be quickly and easily applicable. Such in between steps would ensure more rapid and much more uniform compliance -- with less effort and cost to the public -- than is now the case.

The Connecticut model provides a whole series of such in-between steps. They are of two types: (1) administratively-imposed civil assessments and (2) administratively-imposed sureties.

Economic Civil Assessments

Administratively-imposed, economic civil assessments are the first of these in between steps. Armed with this authority, the Department can charge a delinquent regulatee for delay even as it is being incurred.

Furthermore, even if the Department actually imposes such assessments only rarely, the regulatees' awareness of the availability of this tool adds greatly to the credibility of other, less serious in between steps. As mentioned above, warning letters sent to notoriously recalcitrant sources mentioning the possibility of such assessments obtained quick, respectful responses. Previous warning letters not backed by such assessment authority were simply ignored.

Economic civil assessments can be used to give regulatees small warning jabs as well as to charge them for the full benefit of noncompliance. If, as is commonly the case with recalcitrant sources, the regulatee has violated a procedural requirement for which a civil assessment has been defined, the Department can impose a small procedural civil assessment on it while simultaneously warning that continued noncompliance will make it liable to the much larger civil assessment for substantive noncompliance. Alternatively, the Department could impose an assessment for the source's past substantive violation, but mitigate it down to a small amount while making clear that future noncompliance will lead to a much larger assessment.

Sureties

Sureties (e.g., performance bonds and escrows) provide a wide range of additional in between steps. By tying them to the same economic standard as a civil assessment, sureties can provide a series of finely gradated and economically coherent responses from which the Department can choose depending on the facts of the case before it.

Connecticut's Enforcement Act of 1973 authorizes the Department to require such "performance bonds or other security" as is necessary. This broad authorization in effect allowed the DEP to select whatever financial devices were best suited to administrative environmental regulation. The CEP found the escrow device to be most promising. It imposes a relatively small cost on the regulatee; it is available to small as well as big regulatees; and it entails no additional burdens for the Department.

In its basic form, the escrow works as follows: a regulatee that is required to take certain steps to come into compliance and about whose performance the Department has become concerned is required to post cash, government bonds, or other acceptable security equal in value to what the estimated economic civil assessment would be for such a source for, say, 18 months of noncompliance. The security would be deposited with an escrow agent, typically a bank, who, for a small fee, (1) will hold the security until such time as the source comes into compliance and the agent is so notified by the State; or who(2) will deliver all or part of this security to the State in the event that the source fails to meet future deadlines as agreed.

Requiring a regulatee to post such an escrow is less severe than imposing an economic civil assessment for delayed or nonperformance. Whereas our delinquent asphalt batcher would be liable for a $1666 civil assessment every month it was behind schedule, posting an escrow would cost it roughly $132 per month, the sum of (1) the difference between what it could earn on the resources tied up in the escrow account (at least its cost of capital) and what it will earn either in interest from the bank or on the bonds used as security, and (2) a small fee it must pay the bank. Although the economic bite of this enforcement response is not easily entirely ignored, its chief impact is to force the regulatee to sit up and take notice that, unless it mends its ways and moves promptly to come into compliance, it will be subject to an assessment large enough to make noncompliance economically unattractive.

There is no doubt that imposition of such surety liability will have the sort of sharp communicative impact envisaged. Requiring a source to post a surety virtually ensures extensive high-level management review. The source's lawyers will inevitably be involved; its managers will have to negotiate and approve an arrangement with an escrow agent; and a large sum of money must change hands, even though it is not necessarily lost forever. If the root of the problem had been an uncooperative attitude by lower officials, forcing the matter to the attention of higher-level management may well be sufficient to bring about the desired change in the regulatee's behavior. Moreover, even if the problem runs deeper than local or low-level management, the risk of significant forfeitures has already been demonstrated to have a dramatic effect on the performance of even some of the Department's most recalcitrant regulatees. Last year the Air Compliance Enforcement Section required several historically troublesome cases to post sureties: up to that point, Case A had been 66 percent behind schedule and Case B, 133 percent; thereafter Case A experienced only 2-1/2 percent delay and Case B no delay. Suddenly the managers in these companies treated compliance with the State's orders as being as urgent as a commercial investment project. Company officers went as far as to fly to suppliers to ensure on-time delivery of necessary equipment.

Although requiring posting of an escrow is a less severe step than imposing an economic civil assessment, it is still quite costly for the regulatee. Since adding unnecessarily to the cost of environmental clean-up is in the interest of neither the public nor the Department, the CEP has developed a simple variant of this basic escrow surety device that should have virtually the same communicative impact but at a much reduced cost to the regulatee. This device, the "flexible reserve escrow" works very simply. When the Department first becomes concerned about a regulatee's performance, it will require it to accept liability for posting the same amount as it would if the Department had imposed the full escrow. However, instead of requiring it to post this sum with the escrow agent,the Department would require only a small proportion, e.g. 10 percent, to be actually placed with the agent. If our asphalt batcher were required to post only this 10 percent or $2999.00 it would have lost only one-tenth the interest spread (the difference between what it could earn with the money, its cost of capital, and the interest it would receive on the securities in the escrow account) it would have lost if it had had to post the full amount.

Despite this 90 percent cost saving, the communicative impact of requiring the company to take this action would still be very great. A variety of managers, including members of the source's legal staff, would have to review and approve the document accepting the full $29,992 escrow liability; arrangements would still have to be made with an escrow agent; and a check would have to be drawn-- and justified to the regulatee's financial officers.

If the company fell further behind, the Department could increase the amount it required in the escrow account. If the regulatee regained lost time, the Department could similarly reduce the amount of the reserve it required. Once the source had accepted full liability under the terms of the surety, it would be bound to respond immediately to such subsequent demands by the Department. Because this would be a contractual obligation, the source would have no right to demand administrative hearings or to appeal the Department's actions to the courts.

Requiring a regulatee to accept a flexible reserve escrow but to post only a small percent reserve is an extremely attractive device for the Department to use initially when faced with a regulatee that does not respond to simple warnings. The regulatee cannot ignore this response. It applies the economic leverage of a civil assessment without entailing any significant immediate cost to the source. Because the response is so reasonable, and because it entails virtually no immediate economic cost, it is much less likely to invite a litigative response from the regulatee than requiring the posting of the full escrow amount or, especially, imposing a full economic civil assessment.

With these devices available to the Department, it will probably be able to handle almost every case of delinquency effectively with no more than a warning letter. Backed as these warning letters would be with the Department's authority to respond immediately with concrete and economically adequate incentives, they will be taken seriously.

For the rare regulatee that does not respond to a warning letter, the first, small bite of either a procedural civil assessment or the imposition of a small flexible reserve escrow would provide the Department with sufficient credibility to ensure subsequent prompt compliance.

A Progression of Steps

The several surety devices and the economic civil assessments the Department can now impose administratively fit together into a coherent progression of steps the Department can take depending on the degree of cooperation or recalcitrance with which it is faced. The following table illustrates how the Department might want to use these steps assuming various degrees of delay.

The Progression of Enforcement Options CEP Makes Available

Number of Months Regulatee Has Overrun Compliance Deadline	Step	Comments	Economic Cost Per Month To Regulate*
1	Warning letter	Requires quick, visible follow-up to be credible.	none
2	Warning letter		none
3	Require regulatee to sign acceptance of specific surety liability	Forces top management, lawyers' review of problem area.	none
4 1/2	Require regulatee to post 10% of surety amount in bank	Forces new top mgmt., lawyers', and comptroller's review of area. Economic cost limited to (1) 10% of the difference between the company's cost of capital and the interest rate paid by the escrow/bank or earned from government obligations used as security plus (2) bank fees.	$132.00 (Assumes $29,992 escrow, i.e. 1 1/2 years of civil assessments)
5 1/2	Increase reserve required in bank to 50%	State can increase and decrease amounts required flexibily.	$ 620
4 1/2	Reduce reserve required to 25%		$ 315
6	Partial (50%) forfeiture	Full forfeiture would be at the economic assessment rate that neutralizes the benefits of noncompliance. (Forfeitures can go to either a special fund returnable to the regulatee or the General Fund.)	$ 833
7	Full forfeiture		$ 1666
17	Civil assessment	At economic civil assessment rate. Begins as soon as surety agreement amount exhausted.	$ 1666

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* The figures used here are fitted to the economics of the asphalt batcher analyzed above.

In the unlikely event that the civil assessment does not work, the agency can still go to court.

This progression of steps is a progression of options. The Department does not have to follow any particular pattern of responses in every case. It may decide that certain recalcitrants require the use of relatively drastic steps early in the process. Simple or short cases allow time for only one or two responses. However, having this full range of enforcement options available allows the Department to select exactly the right combination of responses for each particular enforcement problem.

* * * * * * * * * * * * * * * * * * * *

The intermediate enforcement responses outlined above will allow the Department (1) to establish its credibility by demonstrating that its promises are backed when necessary by quick and sure responses, (2) to force the upper-level management of noncomplying sources to focus on the implications of continuing noncompliance, but (3) to do so while imposing only the minimum necessary economic costs on the regulatee.

CONFRONTING CONNECTICUT'S ENFORCEMENT PROBLEMS

The Connecticut Legislature enacted the Enforcement Act of 1973 because the first several years of the then new Department of Environmental Protection's experience attempting to enforce the State's environmental laws had made it clear that the Department needed additional tools if it was to do its job effectively. Before the Act, uncooperative polluters could delay with virtual impunity.

A sample of the file of case summaries reviewed by the Environment Committee of the Legislature as it was considering the Enforcement Act follows. It should help explain the problem the Act was designed to resolve.

Sample Case Histories

> "Ripley Park. Mr. Park is a 74-year-old entrepeneur as set in his ways as Plymouth Rock. One of his ways involves the production of charcoal in an outdoor kiln. The Department calls it burning; he calls it baking. Whatever you call it, the smoke emitted is powerfully odoriferous and dark. In recent years, Mr. Park's farm has been surrounded by suburban housing tracts. Their residents complained mightily about the smoke and sent petitions to the Department. Mr. Park began burning at night. The operation takes 3 days, once a month. Mr. Park refused to accept Certified Mail delivery of Notices of Violation, and when the Order was served by a Sheriff, he ran from the living room and locked himself in the bedroom. He is devoted to his operation and to the money it makes.

> The case [went to court]...The trial lasted four hours, even though, since neither Mr. Park nor his attorney showed up, it was uncontested. The Court issued an injunction. Since then, on the same schedule as before, Mr. Park has made charcoal."
>
> "E. J. Korvette, Inc. The company operates an incinerator in which it burns packaging materials. Violations have been reported steadily since the first one was observed January 7, 1971. The incinerator emits particulates and odor in prohibited quantities, its smoke occasionally reaching Ringlemann violations close to five (the worst possible). The equipment itself is of a type prohibited by Regulation.
>
> On March 10, 1972 an Order to remedy violations of Section §19-13-G16 was issued granting thirty days for Korvette to come into compliance...The Order has been ignored.
>
> As clear as this violation is, as offensive as the emissions may be to immediate neighbors, it is one of hundreds of similar offenses, too time-consuming and insignificant to send to the Attorney General. In any case, the probable impact of prosecution is minimal since the likely "penalty" would be a court order to shape up."
>
> "Polycast Technology, Corp. The company makes plastic windshields for Army helicopters...[and has been the subject of prolonged enforcement efforts by the Department and of repeated court battles]. As a result of his enforcement efforts, the Director of Air Compliance is being sued by the company President for five million dollars. In March 1972, an injunction was issued against the company ordering them to perform four pollution abatement actions (affecting air and water) by August 1, 1972. For no discernible reason, the work....[is not yet done].
> ...."

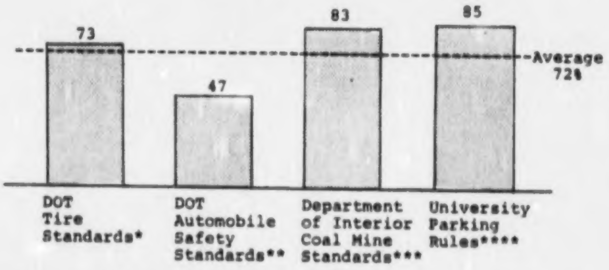
Because these case histories focus on cases that were troublesome, they may have the effect of overdramatizing the problem of environmental law enforcement in Connecticut. Most sources of air and water pollution have either complied voluntarily or have been willing to do so once brought under direct regulation.

Although there are relatively few troublesome, uncooperative sources, the Department must have an efficient, effective way of handling such cases. If scofflaws are not brought to book, voluntary compliance by the presently law-abiding majority is threatened.

This is especially so if, as is often the case in environmental regulation, sources that do not comply are given a significant and unfair economic advantage over commercial competitors that obey the law. If people feel they can get away with delay, they have every economic incentive to try to do so. How widespread foot-dragging becomes will largely depend on (1) how effectively the Department dispatches a small number of tough cases that attract publicity and (2) whether or not regulatees perceive that others in similar situations have been able to ignore the law successfully.

When those subject to regulation perceive that their compliance will be policed by a tight enforcement system, voluntary compliance increases sharply. A CEP survey of the impact of improved enforcement on the rate of voluntary compliance in a variety of regulatory settings outside Connecticut indicated that, after the introduction of improved enforcement, the percent of those who failed to comply voluntarily decreased an average of 72 percent.*

Improvements In Voluntary Compliance As a Result of Improved Enforcement (in percent)



Source: Interviews with agency personnel, enforcement statistics.

* Violations of manufacturers' self-professed standard dropped 73% when standard became enforceable.

** Standards added in 1970; ratio of violations/inspections dropped 47% between 1970 and 1974.

*** Violations/inspections ratio of new standards dropped 83% between 1970 and 1973.

**** The number of faculty members violating parking restrictions dropped 85% after sanctions were developed.

The Department's own experience verifies the relationship suggested by this chart.

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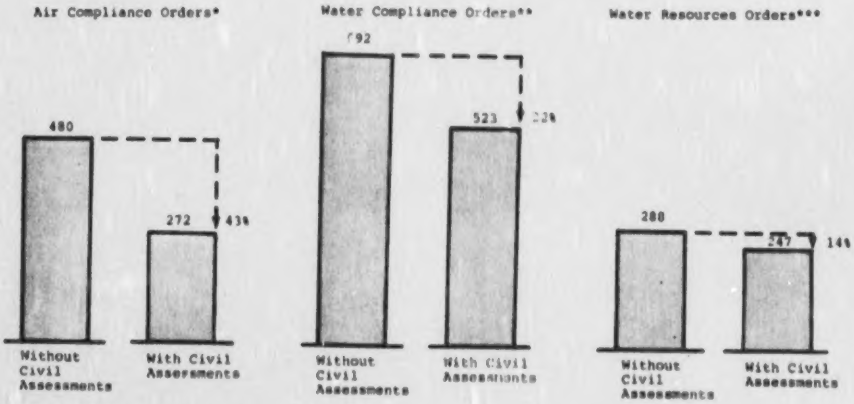
* A detailed discussion of the study is available in the Connecticut State Library. Copies are also available upon request from the Department of Environmental Protection, State Office Building, Hartford, Connecticut and from William Drayton, McKinsey and Company, 245 Park Avenue, New York, New York.

The Air Compliance Unit, the Department's newest and most adequately staffed Unit, has pursued a vigorous enforcement policy, has had the resources to do so effectively, and has obtained an accordingly tough image. Of the State's known sources of air pollution, only 3 percent have had enforcement problems serious enough to require the issuance of orders. Of these, 13 percent were responsible for fully 75 percent of all delay in complying with the terms of these orders--7 percent caused 56 percent. On the other hand, the Water Compliance Unit, which is less well staffed and which had established a public image before it had the legal tools to pursue a tight enforcement policy, is commonly viewed as being "more reasonable." The average water case overruns its legal compliance deadlines by over 100 percent. The Water Resources Unit, drastically under-staffed and almost entirely toothless, finds over 80 percent of the coastal structures (docks, dredging, filling, etc.) it is supposed to regulate in a state of continuing, open violation. (For a further evaluation of the enforcement problems faced by these three Units, see Parts II of Volumes II through IV of this Report.)

The Department's cost effectiveness also depends importantly on its ability to deal effectively with the few tough uncooperative cases. The longer cases drag on, the higher the per-case cost of enforcement becomes for the Department. The longer the case, the more correspondence, the more meetings, the more inspections, and the more formal proceedings are required. Even more important, the lower the voluntary compliance rate, the larger the number of cases the Department must process. The probable impact of intelligent and uniform application of CEP's new enforcement tools by the Department, consequently, is dramatic:

Projected Impact of Civil Assessments on the Average per Case Costs of Enforcement (In Dollars)



Source: Interviews with Unit Staffs; analyses of Unit files.

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* Assumes all sources are informed of their financial liability for failure to abate air pollution. (See Part VI of Volume II.)

** Assumes 30 percent of all current delay is unavoidable. (See Part VI of Volume III.)

*** Based on a CEP study of "Orders to Remove or Get a Permit," average costs of "Orders to Cease and Desist" should be cut by 45 percent. (See Part VI of Volume IV.)

Being able to bring the few recalcitrant cases to book is also important for the morale of the Department staff. These cases bulk very large in the perceptions of the staff, much larger even than the disproportionate amount of time they require to process. The staff view these cases with more than conversational interest: they serve as tests of (1) the seriousness of the Department's top management's environmental commitment and (2) the Department's effectiveness.

Although it is clear that the Department must be able to deal effectively with the tough case, it must also never forget that most citizens comply voluntarily (and that, in programs now experiencing widespread delay and noncompliance, voluntary compliance should increase markedly over a several year period after the CEP tools are introduced). The Department must not impose burdens on 90 percent of those it regulates in order to get a handle on a minority.

Consequently, the Department's new economic enforcement approach has been designed with two key objectives always in mind:

(1) to be sufficiently tight and loophole-free to be able to provide the hard-core recalcitrant case with a prompt, certain, concrete, and adequate incentive to comply, and

(2) to do so in a way that does not impose costs on the majority.

The tools outlined in the last section provide the Department the basic means to accomplish these objectives. The next section outlines how Connecticut's economic enforcement approach has been adapted and applied to the full range of the Department's enforcement problems.

APPLYING THE NEW APPROACH

The discussion so far has dealt with the new tools Connecticut is deploying and what they are designed to accomplish. The following pages discuss how these tools have been applied to the specific enforcement problems of the Department's several regulatory units.

Each application has been made to fit with existing procedures (and with the sharply varying styles and preferences of the different administrative units), achieve the greatest possible reduction in administrative costs, be equitable and legal, and still be sufficiently simple to be practicably useable. Similarly, the basic economic approach has had to be adapted from situation to situation: determining the value of new land created by fill is quite different from estimating how much a baghouse would cost for an asphalt batcher with emissions of 20,000 cubic feet per minute. And, finally, what was designed has had to be tested, drafted, explained to the public, and implemented.

The first part of this section describes how the CEP approach has been fitted to the basic order-based regulatory process used by the Department (and most similar regulatory agencies). The second part summarizes very briefly how this approach has been further tailored to the chief enforcement problems in each of three key areas of environmental regulation: air and water pollution and illegal filling.

FITTED TO THE REGULATORY PROCESS

Fortunately, all three of the Department's units with major enforcement responsibilities (along with most regulatory agencies elsewhere) share a common regulatory process. Most of the new economic enforcement regulations have been fitted to this common process.

Once an environmental problem has been detected, the Department notifies whoever is responsible and, usually, tries to reach agreement regarding what steps must be taken to eliminate the problem by what dates. If the problem is serious and is not cleared up quickly, the Department will issue an order specifying what the regulatee must do and setting a series of deadlines by which various steps must be complete. The regulatee may contest this order by requesting an administrative hearing within a specified number of days. If it does not, or if its challenge is not successful, the order becomes final, i.e. legally binding. The Department then monitors the regulatee's progress and attempts to hold it to the deadlines set out in the order.

This process runs into enforcement difficulties at two separate stages. First, before an order is issued, new incentives are needed to discourage noncompliance and, when noncompliance is found, to encourage the source to accept a reasonably rigorous order (and not plunge the Department into lengthy and expensive litigation). Second, once an order is final, the Department needs to be able to induce the source to meet the deadlines specified in the order. Connecticut's new enforcement approach has been designed to give the Department the tools it needs to deal with both problems. Each of the Department's three enforcement units has two separate but closely related civil assessment regulations:

- A pre-order assessment that recoups from the regulatee whatever benefits it has appropriated to itself by not meeting either the State's emission standards (Air) or permit requirements (Water Compliance and Water Resources).

- An order assessment that charges the regulatee the full value of its delays beyond scheduled order deadlines.

These two assessments are logical extensions one of the other. Since the value of a month's noncompliance generally is the same in both periods, the underlying economics and the amount assessed per month are likely to be identical. Both use roughly the same procedures and safeguards.

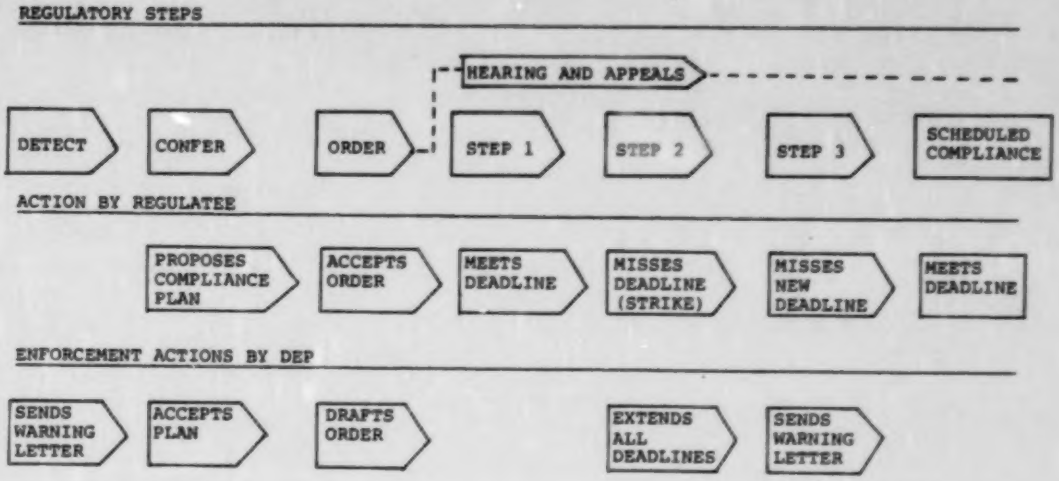
Liability for a pre-order assessment ends the moment a Department order covering the situation becomes final. This provision provides a built in "plea bargaining" incentive to the regulatee designed to induce him to accept the Department's order. The moment the regulatee accepts the order, it is freed from a large, currently accrued liability the Department could assess at will. All it accepts in exchange is a possible future liability that will not accrue unless it falls behind its order schedule. In some cases the period of noncompliance used to calculate the pre-order assessment extends back into the pre-detection period; in all cases pre-order liability begins at the point of detection and grows until the regulatee is under final order. The longer the delay in getting under order, of course, the greater this potential liability becomes. However, if the source agrees to an order before the Department issues an assessment, the Department will not impose the pre-order assessment. And, as long as the regulatee remains on schedule, the Department cannot issue an order assessment.

This disincentive for litigative delay is necessary once orders have teeth. If the Department could only impose civil assessments for violating the terms of an order, it would face a dramatic increase in the number of orders that are contested and ultimately appealed to the courts. Until now, accepting an order has entailed very little risk for a regulatee; with no effective remedy generally available to it, the Department has had to respond to delay with jawboning and extensions. Once regulatees become aware that accepting an order is no longer relatively riskless, the balancing incentive provided by the pre-order assessment is necessary.

The pre-order assessment also serves other important ends, notably that of encouraging voluntary compliance before any Department action becomes necessary. This is especially so for the Water Compliance Unit, which has consistently had trouble with sources starting new discharges without first obtaining a permit.

The following flow diagram describes in a somewhat simplified form how the Department's new tools would be used. The flow of steps, especially in the pre-order period, vary somewhat among the Department's three chief regulatory units. The diagram represents the most common flow applied to the typical (cooperative) case.

The Enforcement Process: A Typical, Cooperative Case


REGULATORY STEPS
HEARING AND APPEALS
DETECT
CONFER
ORDER
STEP 1
STEP 2
STEP 3
SCHEDULED COMPLIANCE
ACTION BY REGULATEE
PROPOSES COMPLIANCE PLAN
ACCEPTS ORDER
MEETS DEADLINE
MISSES DEADLINE (STRIKE)
MISSES NEW DEADLINE
MEETS DEADLINE
ENFORCEMENT ACTIONS BY DEP
SENDS WARNING LETTER
ACCEPTS PLAN
DRAFTS ORDER
EXTENDS ALL DEADLINES
SENDS WARNING LETTER

Once the Department detects a problem, it will normally send a warning letter to the source advising it of the problem, and of its potential liabilities and rights. The letter may also suggest that the source propose a program for resolving the problem and that it then discuss this problem with the Department. If the source is not a repeat offender, or if it has not had prior notice of what was required of it and of its potential liability to civil assessments, the Department will waive the pre-order assessment if the source takes "prompt and effective" action from that time forward to resolve the problem. Even if such a source wishes to contest an order, it will not be subject to the pre-order assessment as long as it is moving vigorously to comply with the law. This provision (See, e.g., §22a-6b-602(g)(4) in Attachment B), although somewhat of an administrative burden to the Department, provides the regulatee with a fundamental safeguard. It ensures that a Department inspector cannot walk up to a small outfit and announce that it has been in violation for the last two years, albeit perhaps unwittingly, and is therefore liable for an assessment of up to $25,000.

When the Department requests a regulatee to provide a compliance plan or other information, "prompt and effective" compliance is defined to include providing such plans and information. Once the source and the Department have agreed to a reasonable plan, the Department will draft and issue an order based on this agreement. The regulatee then has 30 days in which either to accept the order or to request an administrative hearing and contest it. As explained above, once such an order becomes final, the pre-order assessment can no longer be imposed.

Once under an order, the regulatee must meet a series of deadlines, which typically include submitting engineering reports, submitting plans and specifications, ordering necessary materials and equipment, and having installed, tested, and begun operation of the control facility. As long as these deadlines are met, the Department would take no enforcement action.

If a deadline was missed for a legitimate reason, for example, a strike, the Department would continue as it does now, to extend that and all subsequent deadlines. (In order to prevent opening a loophole for the recalcitrant few, the civil assessment regulations bar assessments only (1) when the delay is attributable to the Department or (2) when it has a verifiable cause. Thus strikes, fires, and wars are grounds for mandatory exclusion, but third party delay is not. However, the Department will continue to provide extensions for other reasons, much as it always has, on a discretionary basis.)

On the other hand, if the source misses a deadline without a bona fide reason, the Department will typically send it a warning letter that will note that the source is now behind schedule and that, unless it regains the lost time, it may be subject to a civil assessment for the delay in meeting its compliance schedule. If the source indeed catches up and meets its final deadline, the Department would not impose any civil assessment.

In the event that the regulatee does not move promptly and effectively to come into compliance, or in the event that it fails to comply with its order schedule, the Department will impose civil assessments. The procedure for doing so is almost identical to the procedure used in issuing a compliance order. A Notice of Violation is sent to the regulatee stating the violation for which the assessment is being issued and the amount assessed, and notifying the regulatee of its rights. The regulatee then has 20 days in which to accept the Notice, contest it, or take no action (in which case the Notice becomes a final and effective order at the end of the 20 days).

In the event that a civil assessment order is contested, the contest would first be heard in a Departmental hearing conducted by the Commissioner, a Deputy Commissioner, or a duly appointed hearing officer. Hearings must be conducted in accordance with the Connecticut Administrative Procedure Act and the Rules of Practice of the Department. At such hearings, the Department carries the burden of proving the violation and the reasonableness of the proposed assessment, and the regulatee has full opportunity to cross-examine the Department's witnesses and to present rebutting evidence. Thereafter, the Commissioner will issue a final decision in the matter, which could include a reduced assessment or no assessment. The source could, if dissatisfied, then appeal this decision to the Superior Court for Hartford County. At any time during these proceedings, the regulatee and the Department could, of course, settle the case.

Even after a final, contested decision, a source whose costs of compliance proved less than those assumed in calculating the assessment imposed in the final order, can, as a matter of right, obtain a refund of the resulting over-assessment, with interest. In addition, the Commissioner may mitigate any assessment at any time. (However, if a case involves a significant assessment, the Commissioner must give notice of the amount of the reduction and state the grounds for his action.)

In the unlikely event that a regulatee should refuse to pay an amount assessed against him, the Enforcement Act provides a quick and effective collection remedy. In such an event, the Department would file a copy of its final civil assessment order with the Clerk of the Superior Court. The Clerk is then required to docket the final order, whereupon it obtains the same status as a final judgment of the court and will be enforced as such by the Sheriff.

PROGRAM APPLICATIONS

This basic approach has been adapted to the particular needs of each of the Department's three primary enforcement units (responsible respectively for air pollution, water pollution, and coastal areas and wetlands). Additional work has also been done to develop an effective enforcement approach to the environmental movement's next enforcement problem: how to ensure that the control facilities it has by now succeeded in getting installed in most major sources are properly operated and maintained. The tool has also been adapted to small, simple procedural violations as well as to the major substantive problems discussed above.

Air Compliance

The Department's Air Compliance Unit was the first to implement CEP's new economic enforcment tools. All public hearings on the proposed regulations were complete by November, 1974; the regulations had been approved by the Legislative Regulations Review Committee by December; the regulations were effective by January; and the Department's first warning letters went out in February of 1975.

The Unit's two major substantive economic enforcement regulations,Sections 602 and 603 reflect the basic pattern outlined above closely. Section 602 provides pre-order assessment liability for violation of the Department's existing particulate, hydrocarbon, sulfur, carbon monoxide, and nitrogen oxide emission control regulations. Section 603 authorizes the imposition of assessments for failure to comply with the terms of a final order to abate such emissions violations. Both assessments are based on identical economics -- charging for the value of having delayed the costs of purchasing, installing, and operating and maintaining necessary control equipment.* (The Section 602 and 603 regulations are reproduced in Attachment B to this volume. Written comments submitted at the time of the public hearings regarding these regulations, including comments by a variety of leading national experts, may be found in Attachment D.)

The Air Compliance Unit has also promulgated and begun to use a small civil assessment designed to encourage those required by Department orders to submit periodic progress reports to do so on time. Even after a concerted follow-up effort in the summer and fall of 1974, fully 17 percent of all progress reports remain seriously delinquent. Cutting this high delinquency rate would help both compliance and Department costs. Progress reports alert both the regulatee and the Department if the regulatee begins to fall behind schedule. Moreover, imposing a civil assessment for delinquent progress reports should cut Department administrative costs both by saving expensive field inspections and by reducing the amount of staff time now spent attempting to obtain delinquent progress reports.

Volume II of the CEP Final Report discusses the Air program in detail. This Volume provides (1) a summary description of the Air program, (2) a detailed baseline analysis of the Air Compliance Unit's enforcement experience before the introduction of these new tools, (3) an explanation of the economics underlying these regulations, (4) the regulations, (5) a detailed operating guide (including a full set of cost curves) and (6) an analysis of the Unit's administrative costs with and without its new economic enforcement tools.

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* The schedule in §22a-6b-602(d) defines the maximum amounts a person with given costs could be assessed. These maximum amounts represent the largest savings a source could be reasonably expected to realize by postponing compliance with air quality emission standards or an air abatement order. This schedule is arranged according to equipment and operating costs, so that any regulatee can quickly determine its maximum possible assessment by classifying its case according to these two cost factors and then locating the corresponding maximum amount in the schedule. Calculation of individual civil assessments (§§22a-6b-602(e) and 603(e)) would be governed by the same calculus but would use data describing the economics of a particular violator. By contrast, the schedule of maximum assessment amounts was constructed using assumptions that all tend to increase the amount of the assessment. Individual assessments would, therefore, be much lower than the maximums listed in the schedule.

Water Compliance

The Water Compliance Unit is proposing three economic civil assessment regulations: Section 503 for violations of the terms of an order or permit, Section 502 for discharging without a permit, and Section 504 for failing to submit monitoring reports as required in the terms of an order or a permit.

Section 503 is modeled closely on the Air Compliance Unit's Section 603 regulation authorizing civil assessments for order violations. It has, however, been somewhat modified to fit the different operating requirements and statutes of the Water Compliance Unit.

Section 502 is, however, quite different from the Air Compliance Unit's Section 602. Pre-order assessment liability for water pollution cannot be based on effluent standards as the Air Compliance Unit's are on emission standards:

* Connecticut in effect requires sources to reduce discharges to the extent technologically feasible. Although the Department has developed informal, _de facto_ discharge standards from this technical standard for common types of sources, liability could not be tied to such a standard because (1) it changes as technology advances, (2) many cases are not covered and (3) the exact standard applicable to a given case is not determined until after a discharge is detected.

* Water Quality Standards are generally less stringent than the technical feasibility standard; and in any case, they do not translate readily into clear predeterminable effluent standards for individual dischargers because the allowable individual discharge for a given class of stream depends on the concentration and types of other dischargers on the stream.

* The Federal Effluent Guideline standards cannot be used because:

  -- they rely on a measure of each industry's "product volume", e.g. the average number of ducks a duck farmer maintains over a year or the number of square inches of metal a metal plating company plates in a year. Much of this information is unknown even to the company. And the Department is certainly in no position to contest whatever number a regulatee may assert -- which is to say that it will be virtually impossible to enforce such a standard.

  -- the effluent limitations required by the Connecticut standard vary significantly from those set by the Federal Guidelines from

> case to case. (A CEP comparison found Connecticut requirements ranging from being 72 percent less stringent to several thousand percent more stringent than the Federal Effluent Guidelines for the same source.)

If pre-assessment liability in water pollution cases cannot be based on violations of effluent standards, they can be based on violations of permit requirements. Any person or municipality planning a new (or significantly modified) discharge is required to obtain a permit before initiating the discharge. Failure to do so is a clear, easily proven offense -- for which Section 502 authorizes the imposition of economic civil assessments. If it is made clear that sources that already have permits may not continue discharging after their permits expire without obtaining a new permit (and clarification of this point may require issuance of a regulation in Connecticut) virtually all dischargers will either (1) be operating under the terms of an order or permit, which usually specifies effluent standards for the source and which can be enforced under the terms of Section 503, or (2) they will be subject to assessment under Section 502. And Section 502 liability can be used, much like Section 602 liability to induce regulatees to accept an order (or the equivalent conditions of a permit).

Moreover, enforcing the requirement that new sources must obtain a permit before initiating a discharge is itself an important objective for the Water Compliance Unit. Once a source has built its plant and hired its workforce, the Department (and the public) are faced with a fait accompli. Closing the source is not politically feasible; and often certain approaches to control that would have been possible if installed earlier have become unrealistic once the source begins operation.

Section 504 authorizes the imposition of economic civil assessments if sources fail to submit monitoring reports regarding the volume of water they are discharging and the nature and quantity of the pollutants in that discharge periodically as required in either an order or a permit. These monitoring reports, somewhat like the progress reports required in Air Compliance orders, serve several useful purposes: (1) they force sources to think about their pollution abatement facilities from time to time,(2) they provide important planning information needed by both State and Federal governments, and (3) they save the State expensive field inspections. The assessment is based on the average cost of sampling, analyzing, and recording whatever water quality conditions the source was required but failed to monitor. Thus, for example, if a source had been required to take a composite sample; to analyze for total suspended solids, nickel, zinc, tin, cyanide and pH; and to report the results to the Department -- and if the regulatee failed to do so, the Department would be authorized to impose a civil assessment of $90 on the regulatee for its failure. This assessment is the sum of the following components: $19 for the sampling and transmittal to a lab; $8, $12, $11, $14, $16, and $3 respectively for each of the required analyses; and $7 for reporting to the Department. (A copy of these regulations will be found in Attachment B.)

Volume III of the CEP Final Report provides the same full explanation of the Water Compliance CEP program that Volume II, outlined above, does for the Air Compliance program.

Water Resources

The CEP program in the Water Resources Unit is much more narrowly focused than in either the Air or Water Compliance programs. Economic civil assessments are provided only for illegal commercial and institutional filling in coastal and tidal waters. There are several reasons for this close focus:

* The Water Resources Unit is acutely understaffed and could not now support a large new program. A careful CEP sample survey of the Connecticut coast indicated that between 9 and 14 illegal commercial fills account for fully 89 percent of the cubic yards of illegal fill placed along the coast each year. The Unit could practically manage this number of cases.

* Illegal coastal filling does permanent, serious environmental damage. Of the large number of coastal enforcement problems, it deserves priority.

* Relatively clear standards exist governing when fill will and will not be allowed, and the statute authorizing regulation in this area (unlike that governing inland wetlands) is well established.

* Once an economic enforcement system for coastal filling had been perfected and tested, it can later be easily extended to any other type of filling, specifically including filling in inland and/or tidal wetlands.

The coastal filling regulations are structured in a manner roughly similar to the Water Compliance CEP regulations. Section 413 imposes liability for violating the terms of a Water Resources order, which typically requires a source to cease and desist filling and/or to modify or remove an illegal fill. Section 412 imposes liability for having filled without a permit. And, Section 411 imposes a flat-rate procedural civil penalty for failing to have submitted a complete permit application prior to beginning filling.

However, the economics underlying the Water Resource remedies are very different from those underlying the Air and Water Compliance regulations. The benefit derived by delinquent regulatees in the Air and Water cases consisted of the value of delaying the expenses of purchasing, installing, and operating and maintaining control facilities. In the case of illegal coastal fill, the delinquent regulatee benefits in three ways. He receives (1) the value of the use of the new coastal land created by the illegal fill, (2) the value of having delayed the expense of removing the illegal fill (In legal theory, illegal fill constitutes a nuisance, and he who places it is under an immediate and continuing, automatic obligation to remove it.), and (3) the savings of not having prepared an application, which must contain engineering drawings and on average costs roughly $800, before filling. The process of accurately estimating the value derived from the land created by the fill and the costs of modification/removal of the fill, both necessary components for determining economic remedies in filling cases, is naturally entirely different from the process of estimating the costs of installing and operating control facilities.

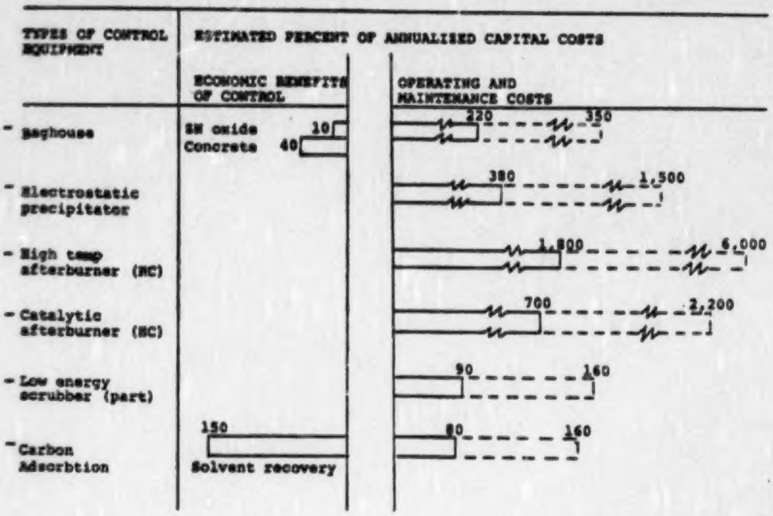
How the economics of filling cases is handled is described in Volume IV of the CEP Report. Volume IV also provides a full description of the Water Resources CEP program, the results of a detailed survey of the enforcement problems the Department faces along the Connecticut coast, copies of the Water Resources CEP regulations (Sections 411 to 413), and an analysis of the Water Resource Unit's administrative costs before and after the introduction of these new tools.

Operating and Maintenance

Over the last several years, environmental regulators have been focusing on the problem of getting sources of pollution to install often expensive control facilities. Now, especially in a state like Connecticut that has had a vigorous environmental program and good citizen support, most significant sources have control equipment in place. Consequently, in the future, environmental regulation is going to have to focus much more than it has so far on ensuring that sources operate and maintain the equipment they have already installed properly. If this objective can not be achieved, much of the benefit of the last half decade's effort to install control facilities may be lost.

It is also clear that the operating and maintenance problem is a tough one. It is going to be difficult to get sources to operate and maintain properly because it is much more in their economic interest not to operate and maintain than it ever was not to invest in the control equipment in the first place. The following diagram, which compares on an annualized basis the capital costs and the operating and maintenance costs of each of the major types of air pollution control equipment, makes this clear. In every case, the costs to the regulatee of operating and maintaining its control equipment were much greater -- usually many times greater -- than the annualized capital costs of the equipment.

Most Control Costs are O&M Costs



In the rare instances where there is any secondary material recovery at all, it does little or nothing to offset these costs. Moreover, the ease with which control equipment can be turned on and off makes detection and proof difficult, which invites evasion.

The proposed O&M program relies on four major components:

(1) Standards of control equipment performance based on operating parameters of the equipment -- e.g. pressure drop, air flow, water flow, temperature, fuel consumption;

(2) Continuous monitors to measure and record emissions and/or performance of operating parameters;

(3) Assessments based on cost savings from improper O&M and/or monitoring;

(4) A limited permit program.

The O&M program imposes costs on regulatees only after they have had prior contact with the Department and ample notice of their obligation to operate properly and the enforcement consequences of improper O&M. The Department will advise regulatees of their O&M obligation once they install control equipment. For the majority of regulatees who thereafter operate properly, the O&M enforcement program has no application and imposes no costs. The program only affects the relatively small number of regulatees who, after notice and warning, are found to be operating control equipment improperly.

Detection of visible emissions from a controlled source, or of control equipment being operated in a manner inconsistent with the operating parameters established at a satisfactory stack test, will lead to an order which requires the regulatee to obtain an

O&M permit. The permit will contain a timetable for developing O&M standards expressed as performance levels for a combination of operating parameters that reflect proper operation of the control equipment. For scrubbers, for example, parameter standards might be set for pressure drop, water flow, and gas flow. Regulatees will be required to propose parameter standards based on manufacturer's specifications and/or stack test results. The O&M permit will generally also require the regulatee to install continuous monitors and recorders of either emissions or of the performance of the operating parameters for which standards have been set. Finally, the permit will contain a condition that the regulatee provide assurances of future proper O&M by agreeing to accept the burden of proving continuous proper O&M in the event the Department detects another O&M violation in the future. Civil assessments, based on the costs saved as a result of improper O&M or improper monitoring, apply to operating without a permit and to operating in violation of O&M standards and/or monitoring requirements.

Economic assessments for O&M violations, then, would be based on savings in (1) the operating and maintenance costs and (2) the equipment replacement costs of the source's control facilities. Department staff can determine these costs using the same cost curves as are used for estimating equipment and operating costs in Sections 602-603 abatement civil assessments. Equivalent cost curves have been developed to simplify estimating the savings likely to accrue to a source that is violating monitoring requirements. For both O&M and monitoring violations, the staff can handle inflation, cost of capital, taxes, and the process of calculating the resulting assessment just as it does in Sections 602 and 603.

Similarly, economic assessments for failure to comply with monitoring requirements are based on equipment and operating costs. The Department can estimate these costs using cost curves similar to those developed for emissions/order violations, and it can determine the other variables and do the necessary subsequent calculations using exactly the same tools developed for the Section 602 and 603 regulations. In order to discourage regulatees from shutting down control equipment during periods of monitoring failure, monitoring assessments are initially calculated to reflect savings from improper O&M. It will, however, be adjusted to the much lower monitoring assessment level upon a showing by the regulatee that it made the expenditures for proper O&M during the monitoring failure.

The Department's proposed approach to O&M enforcement should (1) impose no burden on those who comply, (2) allow an effective response to repeat offenders, and (3) allow maximum scope for change in the standards used as developing engineering knowledge and enforcement experience in this new area dictate.

Volume V provides a full description of this approach along with an explanation of the economics used in this approach and annotated copies of draft O&M regulations.

CONCLUSIONS

Connecticut is introducing a new economic approach to environmental law enforcement. A good many of the innovations in this approach should have broad application in other regulatory settings. The Connecticut model shows how economics can be used to calculate remedies that are effective, unquestionably equitable, and practically useable. The availability of such economic remedies in turn makes it possible to overcome the serious philosophic objections that have inhibited legislatures from granting executive departments the power to impose financial incentives on delinquent regulatees directly.

Administrative imposition of economic civil assessments and/or surety devices would allow regulators to provide an immediate, concrete incentive to the scofflaw. With the regulator no longer caught with having to choose between the two extreme and inadequate responses of jawboning or going to court, even the recalcitrant regulatee would find it in its economic interest to comply. And, once the tough cases have been handled effectively, the rate of voluntary compliance by all other regulatees would improve sharply. Increased voluntary compliance would (1) cut regulatory costs and (2) speed environmental clean-up significantly.

[redacted]

ATTACHMENT A

THE ENFORCEMENT ACT OF 1973

The Enforcement Act of 1973, PL 73-665, gives the Department the power to impose civil assessments and to require sureties, and it defines how these powers may be used. The most important portions of the Act, Sections 2 and 3(7), now Sections 22a-6(b) and 22a-6 of the General Statutes, follow. The full text of the Act may be found in Volume VI.

The Act was initially designed by a Department task force that had the broad outlines of the CEP enforcement approach outlined in this Report in mind when it was doing its work. This task force consisted of Henry Beal, then an attorney in the Air Compliance Unit and now Director of Air Compliance; William Drayton, a McKinsey and Company lawyer/economist/management consultant with a special interest in regulatory and incentive design; and David Tundermann, then and until recently the Department's General Counsel and now a member of the staff of the President's Council on Environmental Quality. The New York law firm of Davis, Polk, and Wardwell provided most valuable research and drafting assistance.

SECTION 2: ADMINISTRATIVELY-IMPOSED CIVIL ASSESSMENTS

Sec. 22a-6b. Imposition of civil penalties by the commissioner. (a) The commissioner of environmental protection is authorized to adopt a schedule or schedules establishing the amounts, or the ranges of amounts, of the civil penalties which may become due under this section. Such schedule or schedules shall be adopted by the commissioner after public hearings pursuant to section 22a-6, and may be amended from time to time in the same manner as for adoption. The civil penalties established for each violation shall be of such amount as to insure immediate and continued compliance with applicable laws, regulations, orders and permits. Such civil penalties shall not exceed the following amounts:

(1) For failure to file any registration, plan, report or record, or any application for a permit, for failure to display any registration, permit or order, or file any other information required pursuant to any provision of section 14-100b or 14-100c, subdivision (3) of subsection (b) of section 15-121, chapter 348, sections 19-507, 19-508, 19-508a, 19-513a, 19-514, 19-517, 19-519, 19-519a, 19-524b, 19-524c, 19-524g, 19-524n, 22a-5, 22a-6, 22a-7, 22a-39, 25-2, 25-4a, 25-4d, 25-4e, 25-4f, 25-7a, 25-7b, 25-7d, 25-7e, 25-8a, 25-8c, 25-10, 25-11, 25-12, 25-15, 25-26, 25-26a, 25-27, 25-54c to 25-54l, inclusive, or 25-54aa, 25-54cc, 25-54dd, 25-54ee, 25-54hh, 25-54ii, 25-54ll, 25-54oo, 25-54pp or 25-110 to 25-114, inclusive, or any regulation, order or permit adopted or issued thereunder by the commissioner, and for other violations of similar character as set forth in such schedule or schedules, no more than one thousand dollars for said violation and in addition no more than one hundred dollars for each day during which such violation continues after receipt of a final order of the commissioner under subsection (c) of this section assessing the civil penalty for such violation;

(2) For deposit, placement, removal, disposal, discharge or emission of any material or substance in violation of any provision of section 14-100b or 14-100c, subdivision (3) of subsection (b) of section 15-121, chapter 348, sections 19-507, 19-508, 19-508a, 19-513a, 19-514, 19-517, 19-519, 19-519a, 19-524b, 19-524c, 19-524g, 19-524n, 22a-5, 22a-6, 22a-7, 22a-39, 25-2, 25-4a, 25-4d, 25-4e, 25-4f, 25-7a, 25-7b, 25-7d, 25-7e, 25-8a, 25-8c, 25-10, 25-11, 25-12, 25-15, 25-26, 25-26a, 25-27, 25-54c to 25-54l, inclusive, 25-54aa, 25-54cc, 25-54dd, 25-54ee, 25-54hh, 25-54ii, 25-54ll, 25-54oo, 25-54pp or 25-110 to 25-114, inclusive, or any regulation adopted thereunder by the commissioner, and for other violations of similar character as set forth in such schedule or schedules, no more than twenty-five thousand dollars for said violation and in addition no more than one thousand dollars for each day during which such violation continues after receipt of a final order of the commissioner under subsection (c) assessing the civil penalty for such violation;

(3) For violation of the terms of any final order, except final orders under subsection (e) of this section and emergency orders and cease and desist orders as set forth in subdivision (4) of this subsection, of the commissioner, for violation of the terms of any permit issued by the commissioner, and for other violations of similar character as set forth in such schedule or schedules, no more than twenty-five thousand dollars for said violation and in addition no more than one thousand dollars for each day during which such violation continues after receipt of a final order of the commissioner under subsection (c) of this section assessing the civil penalty for such violation;

(4) For violation of any emergency order or cease and desist order of the commissioner, and for other violations of similar character as set forth in such schedule or schedules, no more than twenty-five thousand dollars for said violation and in addition no more than five thousand dollars for each day during which such violation continues after receipt of a final order of the commissioner under subsection (c) assessing the civil penalty for such violation.

(b) In adopting the schedule or schedules prescribed by this section, the commissioner shall consider the amounts, or ranges of amounts, of assessment necessary to insure immediate and continued compliance, and the character and degree of injury or impairment to, or interference with, (1) public health, safety or welfare, (2) the public trust in the air, water, land and other natural resources of the state, and (3) reasonable use of property which is caused or is likely to be caused by the type of activity described in such schedule or schedules.

(c) In addition, in setting a civil penalty in a particular case, the commissioner shall consider all factors which he deems relevant, including, but not limited to, the following:

(1) The amount of assessment necessary to insure immediate and continued compliance;

(2) The character and degree of impact of the violation on the natural resources of the state, especially any rare or unique natural phenomena;

(3) The conduct of the person incurring the civil penalty in taking all feasible steps or procedures necessary or appropriate to comply or to correct the violation;

(4) Any prior violations by such person of statutes, regulations, orders or permits administered, adopted or issued by the commissioner;

(5) The economic and financial conditions of such person;

(6) The character and degree of injury to, or interference with, public health, safety or welfare which is caused or threatened to be caused by such violation;

(7) The character and degree of injury to, or interference with reasonable use of property which is caused or threatened to be caused by such violation.

(d) If the commissioner has reason to believe that a violation has occurred for which a civil penalty is authorized by this section, he may send to the violator, by certified mail, return receipt requested, or personal service, a notice which shall include:

(1) A reference to the sections of the statute, regulation, order or permit involved;

(2) A short and plain statement of the matters asserted or charged;

(3) A statement of the amount of the civil penalty or penalties to be imposed upon finding after hearing that a violation has occurred or upon a default; and

(4) A statement of the party's right to a hearing.

(e) The person to whom the notice is addressed shall have twenty days from the date of receipt of the notice in which to deliver to the commissioner written application for a hearing. If a hearing is requested then, after a hearing and upon a finding that a violation has occurred, the commissioner may issue a final order assessing a civil penalty under this section which is not greater than the penalty stated in the notice. If such a hearing is not so requested, or if such a request is later withdrawn, then the notice shall, on the first day after the expiration of such twenty day period or on the first day after the withdrawal of such request for hearing, whichever is later, become a final order of the commissioner and the matters asserted or charged in the notice shall be deemed admitted unless modified by consent order, which shall be a final order. Any civil penalty may be mitigated by the commissioner upon such terms and conditions as he in his discretion deems proper or necessary upon consideration of the factors set forth in subsection (b) hereof.

(f) All hearings under this section shall be conducted pursuant to sections 4-177, to 4-184, inclusive. The final order of the commissioner assessing a civil penalty shall be subject to appeal as set forth in section 4-183 except that any such appeal shall be taken to the superior court for Hartford county and shall have precedence in the order of trial as provided in section 52-191. Such final order shall not be subject to appeal under any other provision of the general statutes. No challenge to any final order of the commissioner assessing a civil penalty shall be allowed as to any issue which could have been raised by an appeal of an earlier order, notice, permit, denial or other final decision by the commissioner. Any civil penalty authorized by this section shall become due and payable (i) at the time of receipt of a final order in the case of a civil penalty assessed in such order after a hearing, (ii) on the first day after the expiration of the period in which a hearing may be requested if no hearing is requested, or (iii) on the first day after any withdrawal of a request for hearing.

(g) Any person acting within the terms and conditions of a final order or permit issued to him by the commissioner shall not be subject to a civil penalty, under this section, for such actions.

(h) A civil penalty assessed in a final order of the commissioner under this section may be enforced in the same manner as a judgment of the superior court. Such final order shall be served in person or by certified mail, return receipt requested. Any notice of violation or final order against a private corporation shall be served upon at least one of the individuals enumerated in section 52-57. After entry, a transcript of such final order may be filed by the commissioner, without requiring the payment of costs as a condition precedent to such filing, in the office of the clerk of the superior court in any one or more of the following counties: Any county in which the respondent resides, any county in which the respondent has a place of business, any county in which the respondent owns real property and any county in which any real property which is a subject of the proceedings is located; or, if the respondent is not a resident of the state of Connecticut, in Hartford county. Upon such filing, such clerk or clerks shall docket such order in the same manner and with the same effect as a judgment entered in the superior court within the county. Upon such docketing, such order may be enforced as a judgment of such court.

(i) The provisions of this section, subsection (a) of section 19-518, sections 22a-2, 22a-6, 22a-6a, 22a-7, 25-17, 25-54g, 25-54h, subsection (d) of section 25-54i, 25-54j, 25-54k, 25-54l, 25-54p, subsections (b) and (c) of section 25-54mm and 25-54qq are in addition to and in no way derogate from any other enforcement provisions contained in any statute administered by the commissioner. The powers, duties and remedies provided in such other statutes, and the existence of or exercise of any powers, duties or remedies hereunder or thereunder shall not prevent the commissioner from exercising any other powers, duties or remedies provided herein, therein, at law or in equity.

(P.A. 73-665, S. 2, 17.)

SECTION 3(7): SURETIES

Sec. 22a-6. Commissioner to establish environmental standards, criteria and regulations, make contracts, studies, issue permits. Complaints. Hearings. Bonds. The commissioner may (1) adopt, amend or repeal such environmental standards, criteria and regulations, and such procedural regulations as are necessary and proper to carry out his functions, powers and duties. No adoption, amendment or repeal of any standard, criterion or regulation shall take effect except after a public hearing, thirty days prior notice of the date, time, place and subject matter of which shall be published in the Connecticut Law Journal, or earlier than thirty days after the publication thereof in said law journal; (2) enter into contracts with any person, firm, corporation or association to do all things necessary or convenient to carry out the functions, powers and duties of the department; (3) initiate and receive complaints as to any actual or suspected violation of any statute, regulation, permit or order administered, adopted or issued by him. The commissioner shall have the power to hold hearings, administer oaths, take testimony and subpoena witnesses and evidence, enter orders and institute legal proceedings including, but not limited to, suits for injunctions, for the enforcement of any statute, regulation, order or permit administered, adopted or issued by him; (4) in accordance with regulations adopted by him, require, issue, renew, revoke, modify or deny permits, under such conditions as he may prescribe, governing all sources of pollution in Connecticut within his jurisdiction; (5) in accordance with constitutional limitations, enter at all reasonable times upon any public or private property, except a private residence, for the purpose of inspection and investigation to ascertain possible violations of any statute, regulation, order or permit administered, adopted or issued by him and the owner, managing agent or occupant of any such property shall permit such entry, or he may apply to any court having criminal jurisdiction for a warrant to inspect such premises to determine compliance with any statute, regulation, order or permit administered, adopted or enforced by him, provided any information relating to secret processes or methods of manufacture or production ascertained by the commissioner during, or as a result of any inspection, investigation, hearing or otherwise shall be kept confidential and shall not be disclosed; (6) undertake any studies, inquiries, surveys or analyses he may deem relevant, through the personnel of the department or in cooperation with any public or private agency, to accomplish the functions, powers and duties of the commissioner; (7) require the posting of sufficient performance bond or other security to assure compliance with any permit or order; (8) provide by notice printed on any form that any false statement made thereon or pursuant thereto is punishable as a criminal offense under section 53a-157; (9) notwithstanding the provisions of section 4-131, make or contract for the making of any alteration, repair or addition to any real asset under his control and management, including rented or leased premises, involving an expenditure of fifty thousand dollars or less, provided any expenditure in excess of twenty-five thousand dollars shall be subject to the bidding procedures in section 4-132.

(1971, P.A. 872, S. 7; P.A. 73-665, S. 3, 17; P.A. 74-188.)

See chapter 34.

[redacted]

ATTACHMENT B

REPRESENTATIVE ECONOMIC ENFORCEMENT REGULATIONS

This Attachment contains four sets of CEP regulations. The first three, between them, exemplify the three major components of the CEP regulatory structure. The fourth spells out the procedures to be used in all civil assessment cases.

Type of Regulation	Subject Covered	Section Number
Pre-Order Assessments	Air Emissions	§602
Order Violation Assessments	Air Orders	§603
Small, flat rate Assessments	Water Monitoring Requirements	§504
Basic CEP Procedures	Procedures	§§100-102

VIOLATING EMISSIONS STANDARDS

ADMINISTRATIVE REGULATIONS

Regulations and notices published herein are printed exactly as submitted by the forwarding agencies. These, being official documents submitted by the responsible agencies, are consequently not subject to editing by the Commission on Official Legal Publications.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Assessment of Civil Penalties for Violation of Air Emissions Standards and Orders of the Commissioner

Section 1. The Regulations of Connecticut State Agencies are amended by adding sections 22a-6b-602 and 22a-6b-603, inclusive, as follows:

Sec. 22a-6b-602(a). Title

This section shall be known and may be cited as "Civil Penalty Regulations: Emission Violations."

Sec. 22a-6b-602(b). Definitions

(1) "Assessment period" means the period of time, expressed in months or portions thereof, during which a regulatee has failed to incur all the expenses necessary to insure immediate and continued compliance with applicable emission standards except that it does not include the time that a person is under a final order of the Commissioner, or the "order assessment period" defined in Section 22a-6b-603(b), or any period before the date on which Sections 22a-6b-602 and 22a-6b-603 of the Civil Penalty regulations become effective.

(2) "Civil penalties final order" means an order of the Commissioner issued pursuant to Sections 22a-6b-101, 22a-6b-602, and 22a-6b-603 of the Civil Penalty Regulations which has become final by the passage of time or by the consent of the regulatee or after hearing.

(3) "Commissioner" means the Commissioner of the Department of Environmental Protection or his lawfully designated agent.

(4) "Compliance timetable" means the schedule of dates by which a person under a final order is to come into compliance with Department regulations.

(5) "Cost of capital" means either: (i) the weighted average of the marginal rates the Commissioner finds a person or class of persons typically must pay per year for debt and owner's equity or (ii) the annual rate of return or of savings that the Commissioner finds a person or class of persons could achieve with a sum of money equal to the cost of compliance; as determined by the Commissioner for a person or class of persons.

(6) "Cost of compliance" means the net, after tax, estimated present value of the sum of equipment costs, operating costs, and all other costs and savings the regulatee will experience in order to come into compliance including, but not limited to inflation, depreciation, such replacement costs as will later be necessary to replace capital equipment that has either worn out or become obsolete, and a discount rate equal to the cost of capital.

(7) "Department" means the Department of Environmental Protection.

(8) "Depreciable life" means the time period of useful life expectancy for capital plant and equipment. This period shall be defined as 10 years until and unless the Commissioner finds otherwise pursuant to Section 22a-6b-602(g)(2) in which case he may consider the depreciation periods allowed for tax purposes by the U. S. Internal Revenue Service and such other guides as he determines are similarly reliable.

(9) "Depreciation" means the amortization of equipment costs over their depreciable life.

(10) "Emit" means the act of releasing or discharging or causing to be released or discharged any air pollutant in violation of the terms of Sections 19-508-9 and 19-508-18 to 19-508-22, inclusive, of the Regulations for the Abatement of Air Pollution. An "emissions standard" is any requirement set forth in Sections 19-508-9 and 19-508-18 to 19-508-22, inclusive, and an "emissions violation" is a violation of an emissions standard.

(11) "Equipment costs" means the installed capital costs of such equipment as is or may be required to bring an unabated activity into compliance with applicable emission standards. Such costs shall include, but not be limited to, the cost of equipment required to control emissions effectively, auxilliary equipment, technical and engineering services, and all development and start-up costs including labor, materials and necessary testing. For the purpose of estimating the cost of compliance prior to the date that the unabated activity has been brought into compliance with applicable emissions standards, the Commissioner may assume that what he finds to be the most environmentally effective and reliable equipment available will be used. The Commissioner shall, upon petition by the regulatee once the regulatee has come into compliance, correct the penalty due using actual equipment costs pursuant to Section 22a-6b-602(g)(2).

(12) "Final order" means an order of the Commissioner issued pursuant to Title 19, Chapter 360, Sections 19-508, 19-510, 19-514, 19-515 and/or 19-517 of the Connecticut General Statutes which has become final by the passage of time or by the consent of the regulatee or after hearing.

(13) "Inflation" means the average annual rate of inflation as measured by the changes in the Wholesale Price Index prepared by the United States Department of Labor or such other index of inflation as the Commissioner may determine is most appropriate over the 3 years prior to the year in which the civil penalty is to be assessed.

(14) "Operating costs" means the non-depreciable annual costs for the operation and maintenance of equipment and processes required for the abatement of air pollution which will protect installed control equipment and insure continuous compliance with applicable emission standards.

(15) "Person" includes every individual, firm, partnership, association, syndicate, company, trust, corporation, municipality, and any other legal entity.

(16) "Regulatee" means a person who owns or operates a process or piece of property that has been, is, or may become an unabated activity.

(17) "Unabated activity" means the ownership or operation of any process or piece of property, real or personal, which (i) emits or causes to be emitted, any air pollutant in excess of the emission standards prescribed in Section 19-508-9 and 19-508-18 to 19-508-22, inclusive, of the Regulations for the Abatement of Air Pollution or (ii) is not equipped or operated with the emission controls required by Sections 19-508-18 to 19-508-22. Ownership or operation of each such process or piece of property is a separate "unabated activity" regardless of the number of identical or closely similar processes or pieces of property owned by the same person or located on the same premises.

(5) In setting a civil penalty in a particular case, the Commissioner shall consider all factors which he deems relevant, including, but not limited to those listed below; and he may, as a result of considering and balancing these factors, lower the civil penalty. The factors he shall consider include:

(i) The amount of the assessment necessary to insure immediate and continued compliance;

(ii) The character and degree of impact the unabated activity has on the public trust in the air, water, and land and on the natural resources of the state, especially any rare or unique natural phenomena;

(iii) The character and degree of injury to, or interference with, public health, safety or welfare which is caused or threatened to be caused by the unabated activity;

(iv) The conduct of the person incurring the civil penalty in taking all feasible steps or procedures necessary or appropriate to comply or to correct the unabated activity;

(v) Any prior violations by such person of statutes, regulations, orders or permits administered, adopted or issued by the Commissioner;

(vi) The economic and financial conditions of such person;

(vii) The character and degree of injury to, or interference with reasonable use of property which is caused or threatened to be caused by such unabated activity.

Sec. 22a-6b-602(f). Enforcement proceedings

(1) **Warning letter.** If the Commissioner finds that an emissions violation has probably occurred, he shall send the responsible regulatee a civil penalties warning letter by certified mail or by personal delivery or service. This letter shall notify the regulatee that the Commissioner has reason to believe a violation has occurred. For those cases to which Sections 22a-6b-602(g)(4)(i) and 22a-6b-602(g)(4)(ii) apply, this warning letter shall also notify the regulatee that it may be able to avoid the imposition of civil penalties under Section 22a-6b-602 if it takes prompt and effective action pursuant to the terms of Section 22a-6b-602(g)(4).

(2) **Hearings.** (i) Any person in receipt of a notice of violation issued pursuant to Section 22a-6b-101(a) of the Civil Penalty Regulations may apply to the Commissioner for a hearing pursuant to Section 22a-6b-101(b).

(ii) Such hearing shall be conducted by the Commissioner, a Deputy Commissioner, or a hearing officer from the Office of Adjudication of the Department. Such hearing shall be conducted pursuant to Sections 4-177 to 4-185, inclusive, of the General Statutes and to the Rules of Practice of the Department.

(iii) The Department shall have the burden of producing evidence to prove the emissions violation that provides the basis for imposing the penalty and the reasonableness of the proposed assessment, and the risk of non-persuasion by a preponderance of the evidence shall fall upon the Department.

(iv) If the Commissioner, Deputy Commissioner, or hearing officer presiding at the hearing determines that information important to an accurate determination of all or part of the civil penalty amount is not available at the time of the hearing but will become available later, he may defer determining the amount of the civil penalty due until he establishes that the previously missing information is available, at which time he shall promptly hold a hearing pursuant to Section 22a-6b-602(g)(2) regarding the amount of the civil penalty due. He may not collect any portion of the civil penalty until this hearing is held and a civil penalties final order issued.

(3) **Appeals.** Any person may appeal a civil penalty final order of the Commissioner issued after a hearing pursuant to Section 2(f) of Public Act 73-665.

Sec. 22a-6b-602(g). Mitigation

(1) **General.** The Commissioner may mitigate any civil penalty upon such terms as he in his discretion deems proper or necessary upon consideration of the factors set forth in Sections 2(b) and 2(e) of Public Act 73-665.

(2) **Correction of penalties.** (i) A regulatee in receipt of a notice of violation issued pursuant to Section 22a-6b-101(a) of the Civil Penalty Regulations may petition the Commissioner for correction of the civil penalty assessed against him at any time up to two years after the Commissioner finds that the regulatee has come into compliance. Such petition shall set forth in writing any evidence that the cost of compliance has been or will be less than the Commissioner had initially determined in assessing the civil penalty, and it shall be sent by certified mail or personal service to the Commissioner or the Director of Air Compliance.

(ii) The Commissioner may, in response to such a petition or at his own initiative, lower an assessment he determines was excessive. If the Commissioner takes no action in response to such a petition, or if his response is not satisfactory to the regulatee, the regulatee may obtain a hearing of right once it has come into compliance or at any other time specified in a final order or a civil penalties final order. Following such a hearing the Commissioner shall mitigate the civil penalty if and to the extent that the actual cost of compliance has been less than he had initially determined.

(iii) Refunds shall be made with interest calculated from the time of payment and at the cost of capital rate used to assess the civil penalty.

(3) **Reduction of the assessment period for delays beyond the regulatee's control.** The Commissioner shall exclude from the assessment period such periods of non-compliance as the regulatee proves have been caused by strikes or lockouts; riots, wars, or other acts of violence; floods, hurricanes, or other Acts of God; or other equally severe, unforeseeable and uncorrectible accidents; where such acts or events were occasioned directly upon the regulatee or a person under contract to the regulatee. In addition, the Commissioner shall exclude from the assessment period such periods of non-compliance as were occasioned by delays attributable to the Air Compliance Unit of the Department in excess of routine processing times. Nothing in this section shall prohibit a regulatee from proposing, or the Department from accepting, a compliance timetable which excludes from the assessment period periods of non-compliance caused by other acts or events beyond the control of the regulatee, such as contractors' or suppliers' delays.

(4) **Nonimposition during prompt compliance.** (i) If, upon receipt of a warning letter defined in Section 22a-6b-602(f)(1) and continuously thereafter until (a) the end of ninety days or such longer period as the Commissioner may allow or (b) at the end of the assessment period, whichever occurs first, the regulatee takes all steps necessary to bring the unabated activity promptly and effectively into continuing compliance with applicable emissions standards, the Commissioner shall not impose the civil penalty assessable under section 22a-6b-602 before (a) the end of the ninety day period or such longer period as the Commissioner may allow or (b) the end of the assessment period, whichever occurs first.

(ii) If the warning letter requests preparation of a compliance plan, the regulatee shall be deemed to have taken prompt and effective action during the period between receipt of such a request and submission of the requested plan if (a) the plan is a detailed written plan of action including a timetable which, once implemented, will achieve compliance as promptly and effectively as possible and if (b) it is submitted no later than forty days after receipt of such a request. The regulatee shall also be deemed to have taken prompt and effective action,

VIOLATING THE TERMS OF AN ORDER

ADMINISTRATIVE REGULATIONS

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Sec. 22a-6b-603(a). Title

This section shall be known and may be cited as "Civil Penalty Regulations: Violation of the Terms of an Order to Abate an Emissions Violation."

Sec. 22a-6b-603(b). Definitions

Except for the following terms, the definitions of Section 22a-6b-602(b) will apply to these regulations:

(1) "Order assessment period" means the period of time, expressed in months or portions thereof, that a person under a final order is behind in conforming to that order's compliance timetable as measured by the time that has elapsed between the date of a scheduled deadline and the date that the abatement, control or compliance measures called for in the scheduled deadline are actually completed.

(2) "Scheduled deadline" means the date in a compliance timetable by which an abatement, control, or compliance measure is scheduled to be completed; such deadline may be for any of the intermediate steps in the compliance timetable or for the final step at which compliance is to be completed.

Sec. 22a-6b-603(c). Civil penalties for violating the terms of an order

Any person subject to a final order of the Commissioner to abate an emissions violation who is not in compliance with the terms of that order shall be liable to a civil penalty assessed by the Commissioner pursuant to Public Act 73-665, Section 2(a)(3), in accordance with the procedures prescribed in Section 22a-6b-101 to 22a-6b-102 of the Civil Penalty Regulations, inclusive.

Sec. 22a-6b-603(d). Schedule of maximum assessments

(1) Persons responsible for an unabated activity that is under but not in compliance with the terms of a final order may be assessed a civil penalty no larger than the product of (a) the maximum monthly civil penalty the Commissioner may assess under the schedule of maximum assessments of Section 22a-6b-602(d) against a person

for an unabated activity with the same equipment costs and operating costs and (b) the number of months and/or fractions thereof the Commissioner determines are in the order assessment period.

(2) The Commissioner shall provide a written explanation of how these maximum assessments are calculated to any regulatee upon request.

(3) The Commissioner shall impose lesser penalties pursuant to Section 22a-6b-603(e)(1-2) if he finds the probable advantages of delay are smaller than indicated in this schedule, and he may further lower these penalties pursuant to Sections 22a-6b-603(e)(5) and/or 22a-6b-603(g).

(4) In no case shall the assessment exceed $25,000 plus $1000 for each day that the unabated activity continues after the regulatee has received a civil penalties final order.

(5) The Commissioner has determined that the maximum remedies provided in this schedule will insure immediate and continued compliance and will protect (i) the public health, safety, and welfare; (ii) the public trust in the air, water, land and other natural resources of the state; and (iii) the reasonable use of property.

Sec. 22a-6b-603(e). Determination of amount in individual cases

(1) The Commissioner shall determine the amount of the monthly civil penalty he may assess for each individual case of an unabated activity not conforming to or complying with the terms of a final order based on the actual or probable cost of compliance required of that particular activity. Individual assessments are calculated in four broad steps: the gross cash flow of the required compliance expenditures, chiefly equipment costs and operating costs, is determined; the net cash flow is established by taking tax and other savings into account; this net cash flow is discounted to present value; and the individual monthly civil penalty is calculated as that amount which would, if paid monthly, amortize the net present value of the project.

(2) The Commissioner shall calculate the total civil penalty by multiplying the monthly civil penalty by the number of months or fractions thereof in the order assessment period.

(3) The Commissioner shall provide a written explanation of this methodology upon request. He shall also provide a written summary of the calculations used to determine a particular assessment, except to the extent he is required to maintain the confidentiality of certain information pursuant to Section 22a-6b-603(h), upon written request by an interested party or the affected regulatee.

(4) In no case shall an individual assessment exceed either (i) the maximum civil penalty Section 22a-6b-602(d) would allow per month for an unabated activity with the same equipment costs and operating costs, or (ii) for the total civil penalty due during the entire order assessment period, $25,000 plus $1000 for each day that the unabated activity continues after the regulatee has received a civil penalties final order.

(5) In setting a civil penalty in a particular case, the Commissioner shall consider all factors which he deems relevant, including but not limited to those listed below; and he may, as a result of considering and balancing these factors, lower the civil penalty. The factors he shall consider include:

(i) The amount of the assessment necessary to insure immediate and continued compliance;

(ii) The character and degree of impact the unabated activity has on the public trust in the air, water, and land and on the natural resources of the state, especially any rare or unique natural phenomena;

(iii) The character and degree of injury to, or interference with, public health, safety or welfare which is caused or threatened to be caused by the unabated activity;

(iv) The conduct of the person incurring the civil penalty in taking all feasible steps or procedures necessary or appropriate to comply or to correct the unabated activity;

(v) Any prior violations by such person of statutes, regulations, orders or permits administered, adopted or issued by the Commissioner;

(vi) The economic and financial conditions of such person;

(vii) The character and degree of injury to, or interference with reasonable use of property which is caused or threatened to be caused by such unabated activity.

Sec. 22a-6b-603(f). Enforcement proceedings

(1) **Hearings.** (i) Any person in receipt of a notice of violation issued pursuant to Section 22a-6b-101(a) of the Civil Penalty Regulations may apply to the Commissioner for a hearing pursuant to Section 22a-6b-101(b).

(ii) Such hearing shall be conducted by the Commissioner, a Deputy Commissioner, or a hearing officer from the Office of Adjudication of the Department. Such hearing shall be conducted pursuant to Sections 4-177 to 4-185 of the General Statutes and to the Rules of Practice of the Department.

(iii) The Department shall have the burden of producing evidence to prove the basis for imposing the penalty and the reasonableness of the proposed assessment, and the risk of non-persuasion by a preponderance of the evidence shall fall upon the Department.

(iv) If the Commissioner, Deputy Commissioner, or hearing officer presiding at the hearing determines that information important to an accurate determination of all or part of the civil penalty amount is not available at the time of the hearing but will become available later, he may defer determining the amount of the civil penalty due until he establishes that the previously missing information is available, at which time he shall promptly hold a hearing pursuant to Section 22a-6b-603(g)(2) regarding the amount of the civil penalty due. He may not collect any portion of the civil penalty until this hearing is held and a civil penalties final order issued.

(2) **Appeals.** Any person may appeal a civil penalties final order of the Commissioner issued after a hearing pursuant to Section 2(f) of Public Act 73-665.

Sec. 22a-6b-603(g). Mitigation

(1) **General.** The Commissioner may mitigate any civil penalty upon such terms as he in his discretion deems proper or necessary upon consideration of the factors set forth in Sections 2(b) and 2(c) of Public Act 73-665.

(2) **Correction of penalties.** (i) A regulatee in receipt of a notice of violation issued pursuant to Section 22a-6b-101(a) of the Civil Penalty Regulations may petition the Commissioner for correction of the civil penalty assessed against him at any time up to two years after the Commissioner finds that the regulatee has come into compliance. Such petition shall set forth in writing any evidence that the cost of compliance has been or will be less than the Commissioner had initially determined in assessing the civil penalty, and it shall be sent by certified mail or personal service to the Commissioner or the Director of Air Compliance.

(ii) The Commissioner may, in response to such a petition or at his own initiative, lower an assessment he determines was excessive. If the Commissioner takes no action in response to such a petition, or if his response is not satisfactory to the regulatee, the regulatee may obtain a hearing of right once it has come into compliance or at any other time specified in a final order or a civil penalties final order. Following such a hearing the Commissioner shall mitigate the civil penalty if and to the extent that the actual cost of compliance has been less than he had initially determined.

(iii) The Commissioner shall also mitigate the civil penalty if and to the extent that the regulatee comes into actual final compliance with less delay than the total number of days of delay for which assessments have previously been made while the regulatee was under a final order.

(iv) Refunds shall be made with interest calculated from the time of payment and at the cost of capital rate used to assess the civil penalty.

(3) **Reduction of the order assessment period for delays beyond the regulatee's control.** The Commissioner shall exclude from the order assessment period such periods of non-compliance as the regulatee proves (i) have been caused by strikes or lockouts; riots, wars, or other acts of violence; floods, hurricanes, or other Acts of God; or other equally severe, unforeseeable and uncorrectible accidents; where such acts or events were occasioned directly upon the regulatee or a person under contract to the regulatee. In addition, the Commissioner shall exclude from the order assessment period such periods of non-compliance as were occasioned by delays attributable to the Air Compliance Unit of the Department in excess of routine processing times. Nothing in this section shall prohibit a regulatee from proposing, or the Department from accepting, a compliance timetable which excludes from the order assessment period periods of non-compliance caused by other acts or events beyond the control of the regulatee, such as contractors' or suppliers' delays.

(4) **Notice.** (i) The Commissioner shall report every case in which he lowers a civil penalty pursuant to Section 22a-6b-603(e) or in which he mitigates a civil penalty pursuant to Section 22a-6b-603(g)(1-3), if the monthly civil penalty without such lowering or mitigation would be greater than three hundred dollars, in the Monthly Report of Activities of the Air Compliance Unit. This report shall state the name and address of the regulatee, the amount of the reduction, the amount of the civil penalty still to be assessed, and the grounds for such lowering or mitigation.

(ii) The Commissioner shall also send written notice to all persons who have, within the preceding twelve months requested copies of this Monthly Report, either through the Monthly Report or otherwise, of any hearings to be held regarding such cases where the amount of the civil penalty may be an issue at least ten days prior to the hearing.

Sec. 22a-6b-603(h). Request for information by the commissioner

(1) The Commissioner may require the regulatee to provide such additional information, including information regarding costs, as he deems necessary to effectuate the purposes of Section 22a-6b-603.

(2) Any person who files any statement, record or report with the Commissioner containing false or misleading information or other claims will be liable to criminal prosecution for a Class A misdemeanor punishable by imprisonment for a period up to one year and a fine of up to one thousand dollars ($1000) for each violation pursuant to Section 53a-157 of the General Statutes.

(3) Any information disclosing trade secrets and commercial or financial information provided by a regulatee pursuant to this section will remain confidential if the regulatee so requests in a letter sent by certified mail or personal service to the Commissioner or the Director of Air Compliance, except that such information may be disclosed to other officers, employees, or authorized representatives of the state concerned with carrying out these regulations or when relevant in any hearing conducted under the authority of these regulations by the Department of Environmental Protection or in any judicial proceeding, subject to such safeguards as the hearing officer or presiding judge may impose.

Sec. 22a-6b-603(i). Collection

(1) Payment of the civil penalties assessed under this section may be required monthly, or at such time or time intervals as the Commissioner determines will most effectively limit the Department's administrative costs and further the objectives defined in Section 22a-6b-603(d).

(2) The present value of the total civil penalty assessed, calculated at the time the notice of violation is issued, shall be held constant regardless of the timing of its collection.

Be it known that the foregoing regulations are made, adopted and promulgated by the undersigned pursuant to Sections 22a-6 and 19-508 of the General Statutes and Section 9 of Public Act No. 665 of the 1973 Public Acts, after the publication in the Connecticut Law Journal on September 24, 1974, of the notice of the proposal to adopt them, the holding of advertised public hearings on November 12, 13, and 14, 1974, and after consideration of all relevant matter presented, pertaining to Assessment of Civil Penalties for Violation of Air Emissions Standards and Orders of the Commissioner.

In Witness Whereof, I have hereunto set my hand and seal this 27th day of November, 1974.

DOUGLAS M. COSTLE
Commissioner

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VIOLATING MONITORING REQUIREMENTS

STATE OF CONNECTICUT
RULES AND REGULATIONS
OF
THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

CONCERNING: ASSESSMENT OF CIVIL PENALTIES FOR VIOLATION OF MONITORING REPORT REQUIREMENTS OF ORDERS AND PERMITS ISSUED BY THE COMMISSIONER

Section 22a-6b-504(a). Title. This section shall be known and may be cited as "Civil Penalty Regulations: Violation of Monitoring Report Requirements."

Section 22a-6b-504(b). Definitions. The following definitions apply to this section:

(1) "Commissioner" means the Commissioner of the Department of Environmental Protection or his lawfully designated agent.

(2) "Composite sample" means any sample not identified as a grab sample and required in a permit or order that requires monitoring of a discharge.

(3) "Department" means the Department of Environmental Protection.

(4) "Grab sample" means any sample identified as a grab sample and required in any permit or order that requires monitoring of a discharge.

(5) "Monitoring report" means any report concerning discharges to the waters of the state by any person or municipality that a permit or order requires the person or municipality to file with the Department.

(6) "Municipality" means any metropolitan district, town, consolidated town and city, consolidated town and borough, city, borough, village, fire and sewer district, sewer district and each municipal organization having authority to levy and collect taxes or make charges for its authorized function.

(7) "Person" means any individual, partnership, association, firm, corporation or other entity, except a municipality.

(8) "State-approved, fee-basis wastewater laboratory" means any laboratory licensed or approved for the

analysis of wastewaters on a fee basis by the Connecticut state agency charged with the responsibility of licensing or approving such laboratories.

Section 22a-6b-504(c). Imposition of Civil Penalties.

(1) When the Commissioner determines that a person or municipality has failed to submit a monitoring report required by a permit or order issued pursuant to §§ 25-27, 25-54g, 25-54h, 25-54i, 25-54j, 25-54k, 25-54l, or 25-54aa of the General Statutes, as amended, on or before the due date or the end of the reporting interval specified in the permit or order or has submitted a monitoring report that does not include information required by such permit or order, the Commissioner may assess a civil penalty against such person or municipality pursuant to §22a-6b(a)(1) and (b) through (i), inclusive, of the General Statutes, as amended, and §22a-6b-101 of the Civil Penalty Regulations. If the permit or order calls for the inclusion of flow data in a monitoring report and the report is submitted without the required flow data, the Commissioner may treat the case as one in which no report has been submitted.

(2) Any person or municipality required by such permit or order to submit monitoring reports shall be liable for failure to meet any of the monitoring report requirements of such permit or order, notwithstanding any delegation of responsibility to another person to monitor or to complete and submit monitoring reports.

(3) (i) When the Commissioner determines that a person or municipality is liable for the imposition of a civil assessment under §22a-6b-504(c)(1), he shall cause to be delivered to the person or municipality by certified mail or personal service a letter stating that the person or municipality failed to satisfy the requirement for the monitoring report due on a specified date and indicating the nature of the failure.

(ii) Such a letter shall be sent no later than 90 days after the due date of the report in question.

(iii) The Commissioner may not impose a civil assessment under this section on any person or municipality in regard to any monitoring report unless (A) the requirements of §22a-6b-504(c)(3)(i) have been fulfilled, or (B) the 90 day period discussed in §22a-6b-504(c)(3)(ii) has not elapsed, or (C) the Commissioner had sent the regulatee a §22a-6b-504(c)(3)(i) warning letter concerning an earlier report with closely similar inadequacies to those that give rise to the current liability. For the purpose of this subsection, two reports shall involve "closely similar inadequacies" if neither is submitted at all or if both fail to include required data on flow or if both fail to include required data on one or more required analyses even if the analyses are different.

(4) The Commissioner may not impose a civil assessment under this section in regard to any monitoring report if one year or more has elapsed since the due date of that report.

__Section 22a-6b-504(d)__. __Assessment List__.

(1) The Commissioner shall prepare a list of civil assessment amounts to be known as the Monitoring Report Assessment List. This list shall include assessment amounts based on the costs to persons and/or municipalities required to submit monitoring reports of grab and composite sampling, delivery for analysis, reporting, and analysis for each discharge characteristic covered by monitoring programs administered by the Commissioner. The amounts in the Monitoring Report Assessment List shall (A) for composite and grab sampling, delivery for analysis, and reporting, be based on representative costs to a sample of persons and/or municipalities required to submit monitoring reports, and (B) for each of the listed analyses, be equal to the typical charge of state-approved fee-basis water laboratories. The Commissioner shall revise the relevant parts of the List if he determines that any or all of the representative costs or charges on which it is based have changed so much that such changes cause the amounts in the Monitoring Report Assessment List to be too low to counterbalance the economic benefits of non-compliance or so high in relation to those benefits as to be unreasonable.

(2) No item in the Monitoring Report Assessment List may be included in a civil assessment calculation unless the list containing the amount has been previously published in the Connecticut Law Journal.

__Section 22a-6b-504(e)__. __Calculation of Assessments__. Any civil assessment levied under this section shall be equal to the sum of the amounts from the Monitoring Report Assessment List (A) for

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composite sampling for each required composite sample for which no analysis is reported and for grab sampling for each required grab sample for which no analysis is reported, (B) for delivery for each report not submitted, (C) for analysis for each required analysis for which no results are reported, and (D) for reporting for each report not submitted. The Commissioner shall also consider the factors listed in §22a-6b(c) of the General Statutes, as amended, and he may, based on this consideration, lower the assessment to be levied.

Section 22a-6b-504(f). Schedule of Maximum Assessment Amounts.

(1) No amount in a Monitoring Report Assessment List shall exceed the amount in the corresponding part of the following schedule of maximum amounts.

ITEM	MAXIMUM AMOUNT (in dollars)						
	10	20	30	40	50	60	other
(A) Sampling							
1. grab sample*			X				
2. composite sample**							160
(B) Delivery***						X	
(C) Reporting****			X				
(D) Analysis*****							
General							
1. Alkalinity	X						
2. Biological oxygen demand							70
3. Chemical oxygen demand			X				
4. Total solids			X				
5. Total dissolved solids		X					
6. Total suspended solids		X					
7. Total volatile solids		X					
8. Ammonia (as N)			X				
9. Kjeldahl nitrogen (as N)				X			
10. Nitrate (as N)		X					
11. Total phosphorus (as P)			X				
12. Acidity	X						
13. Total organic carbon				X			
14. Hardness		X					
15. Nitrite (as N)		X					
16. pH	X						
Trace Metals							
17. Aluminum			X				
18. Antimony			X				
19. Arsenic				X			
20. Barium			X				
21. Beryllium			X				
22. Boron				X			
23. Cadmium			X				
24. Calcium			X				
25. Chromium VI			X				
26. Chromium total			X				
27. Cobalt			X				
28. Copper			X				
29. Gold		X					
30. Iron			X				
31. Lead			X				
32. Magnesium			X				
33. Manganese			X				
34. Mercury				X			
35. Molybdenum			X				
36. Nickel			X				
37. Potassium			X				
38. Selenium				X			
39. Silver			X				
40. Sodium			X				
41. Thallium			X				
42. Tin			X				
43. Titanium			X				
44. Vanadium			X				
45. Zinc			X				
Nutrients, Anions, and Organics							
46. Organic nitrogen (as N)			X				
47. Ortho-phosphate (as P)		X					
48. Sulfate (as SO_4)		X					
49. Sulfide (as S)		X					
50. Sulfite		X					
51. Bromide		X					
52. Chloride		X					
53. Cyanide				X			
54. Fluoride			X				
55. Chlorine-total residual		X					
56. Oil and grease				X			
57. Phenols				X			
58. Surfactants				X			
59. Algicides				X			
60. Benzidine					X		
61. Chlorinated organic compounds (except pesticides)							70
62. Pesticides							70
Physical and Biological Parameters							
63. Color	X						
64. Specific conductance		X					
65. Turbidity	X						
66. Fecal Streptococci bacteria				X			
67. Coliform bacteria (fecal)				X			
68. Coliform bacteria				X			
69. Other analyses					X		

*For every grab sample required by the permit or order for which no analyses are reported on or before the due date or the end of the reporting interval specified in the permit or order.

** For every composite sample required by the permit or order for which no analyses are reported on or before the due date or the end of the reporting interval specified in the permit or order.

*** For every report not submitted on or before the due date or the end of the reporting interval specified in the permit or order.

**** For every report not submitted on or before the due date or the end of the reporting interval specified in the permit or order.

***** For every analysis required by the permit or order for which no results are reported.

(2) The Commissioner has determined that the maximum civil penalties provided in this schedule will insure immediate and continued compliance and will

> protect (i) the public health, safety, and welfare; (ii) the public trust in the water, land and other natural resources of the state; and (iii) the reasonable use of property. These maximum amounts are just large enough to ensure that the economic incentive for noncompliance with monitoring report requirements will be eliminated in every case, thereby ensuring immediate and continued compliance and as much protection of the three other listed factors as would higher assessments. Because the schedule sets maximum amounts, it allows these three factors to be considered in setting lower assessments.

Section 22a-6b-504(g). Maximum Assessment. No assessment shall exceed $1000 per monitoring report not submitted in completed form on or before the due date or the end of the reporting interval specified in the permit or order.

Section 22a-6b-504(h). Limited Grounds for Non-Imposition of Assessments.

(1) The Commissioner shall not levy an assessment under §22a-6b-504 if the person or municipality assessed proves that the violation of monitoring report requirements was caused by strikes or lockouts; riots, wars, or other acts of violence; floods, hurricanes, or other Acts of God; or other equally severe, unforeseeable and uncorrectable accidents; where such acts or events were occasioned directly upon the person or municipality assessed or another under contract to that person or municipality.

(2) Nothing in this section shall prohibit a person or municipality from proposing, or the Department from accepting, an agreement which protects from civil assessment liability monitoring report requirement violations caused by other acts or events not covered by subsection (1) of this Section such as contractors' or suppliers' delays.

ADMINISTRATIVE REGULATIONS

Regulations and notices published herein are printed exactly as submitted by the forwarding agencies. These, being official documents submitted by the responsible agencies, are consequently not subject to editing by the Commission on Official Legal Publications.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Assessment of Civil Penalties

Sec. 22a-6b-100. Title

Section 22a-6b-100 to 22a-6b-900, inclusive, shall be known and may be cited as "Civil Penalty Regulations."

Sec. 22a-6b-101. Enforcement proceedings

(a) If the commissioner has reason to believe that a violation has occurred for which a civil penalty has been established, he may send to the violator by certified mail, return receipt requested, or by personal service, a notice which shall include:

(1) A reference to the section of the statute, regulation or order involved;

(2) A short and plain statement of the matters asserted or charged;

(3) A statement of the amount of the civil penalties to be imposed upon finding after hearing that a violation has occurred or upon a default;

(4) A statement of the party's right to a hearing.

(b) The person to whom the notice is addressed shall have twenty days from the date of receipt of the notice in which to deliver to the commissioner written application for a hearing. If a hearing is requested then, after a hearing and upon a finding that a violation has occurred, the commissioner may issue a final order assessing a civil penalty under this section which is not greater than the penalty stated in the notice. If such a hearing is not so requested, or if such a request is later withdrawn, then the notice shall, on the first day after the expiration of such twenty day period or on the first day after the withdrawal of such request for hearing, whichever is later, become a final order of the commissioner and the matters asserted or charged in the notice shall be deemed admitted unless modified by consent order, which shall be a final order. Any civil penalty may be mitigated by the commissioner upon such terms as he in his descretion deems proper or necessary upon consideration of the factors set forth in section 2 (b) of Public Act 73-665.

(c) Final orders assessing civil penalties not appealed pursuant to section 2 (f) of Public Act 73-665, as amended, shall be filed for execution pursuant to section 2 (h) of Public Act 73-665, as amended. Such final orders do not waive or forsake any other remedies or powers the department may have with regard to the matter in question.

Sec. 22a-6b-102. Conflict and severance

(a) The provisions of this section are in addition to and in no way derogate from any other enforcement provisions contained in any statute administered by the commissioner. The powers, duties and remedies provided in such other statutes, and the existence of or exercise of any powers, duties remedies hereunder or thereunder shall not prevent the commissioner from exercising any other powers, duties or remedies provided herein, therein, at law or in equity.

(b) The invalidity of any word, clause, sentence, section, part or provision of these regulations shall not affect the validity of any other part which can be given effect without such invalid part or parts.

[redacted]

ATTACHMENT C

THE ECONOMICS OF ECONOMIC REMEDIES

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Economic remedies must be just large enough to make compliance economically attractive: they must take away the entire benefit of noncompliance -- including whatever return the noncomplying regulatee may be able to earn on the use of the money it has not spent on pollution control for however long the delay continues. Such economic assessments will ensure voluntary compliance because they simultaneously remove the incentive to delay and guarantee those who do comply a commercially attractive "return" on their abatement investment -- not having to pay the assessment. This "return" will be sufficiently attractive to make citizens feel that compliance "pays" because it is calculated at the cost of capital rate appropriate for each source, i.e. because it is as large as the returns the source is obtaining on investments it has recently chosen to make.

An economic assessment is defined to be that payment which would, if made at the end of each month throughout a specified assessment period, have the same net economic impact on a company as the expenditures necessary for compliance with Department requirements throughout that assessment period. In other words, the present value of the stream of assessment payments made over the assessment period would equal the present value of the net flow of compliance costs over the same period.

Economic assessments are based on a simple economic calculus that is commonly used by businessmen in evaluating investment alternatives. This calculus requires four main steps.

(1) Identify the gross cash flow of all expenditures necessary for the source to comply with the law during each year of the assessment period and adjust for anticipated inflation (deflation). Both initial and replacement installed capital costs and operating and maintenance expenses must be considered.

(2) Obtain net cash flow by adjusting the figures in (1) for the effect of tax deductions and credits, chiefly for depreciation of capital equipment and for operating and maintenance expenses.

(3) Discount this net cash flow to a present value (using a cost of capital rate if the source is a business).

(4) Calculate the final civil assessment as that amount which would, if paid monthly over the assessment period, create a stream of payments whose present value (using the same discount rate as in (3)) would equal the present value of the cost of compliance.

The rest of this Attachment outlines this methodology in greater detail. It explains what information is needed, how this information must be adjusted to take the impact of taxes into account, how the calculations are handled by the assessment formula, and how this formula is derived. It then explains how this formula was used to establish the schedules of maximum civil assessments found in the regulations; and, finally, it briefly explains how the formula is used to calculate individual assessments.

DETERMINING THE COSTS OF COMPLIANCE CASH FLOW

The first step in determining how large an economic assessment should be is to identify what costs will be incurred in each year of the period during which control activities can be presumed to continue. (How these costs are determined, the most difficult step in making individual assessments, is explained in Parts III and V of Volume II.) These costs, and how they will be handled in the assessment formula, are outlined below briefly:

(1) Initial capital costs for pollution control equipment/facilities, considered as an expenditure in year zero.

(2) Replacement costs for this abatement equipment. It is assumed that the equipment will be replaced at the end of each depreciation period within the assessment period and that the cash outlay is increased (decreased) assuming an inflation (deflation) rate that is the average of the rates experienced over the three years prior to the date of the assessment. (The assessment period is 20 years for reasons discussed below; in individual assessment cases the depreciation period is presumed to be 10 years unless the Commissioner finds otherwise. The 10 year figure is based on a CEP survey of the typical life expectancy of commonly used air pollution control equipment.)

(3) The salvage value of any equipment to the extent that it is not fully depreciated at the end of the assessment period. This factor is, of course, a credit that reduces the net cost. Salvage value is also adjusted for inflation (deflation).

(4) Annual operating and maintenance costs, i.e. such costs as are required to ensure the continuous effective operation of the pollution abatement equipment over its full depreciable life. These costs are increased (decreased) each year to account for inflation (deflation).

All of these expenses are affected importantly by the impact of various tax provisions. The assessment formula must consider the effects on a source's U. S. income tax of:

(1) An investment tax credit for the purchase of new abatement equipment.

(2) The ability to deduct from taxable income each year:

    (a) depreciation of the capital cost of equipment over its useful life (usually at accelerated rates approved for such equipment), and

    (b) annual operating costs.

In developing assessments from the net cash flow of the costs of compliance created from these cost estimates and tax considerations, the following assumptions apply:

- Tax savings are calculated as if the violator is in a tax bracket with a known effective rate (the variable T in the assessment formula) in all years.
- Regulatees either have or will have sufficient taxable income to take full advantage of any tax credits or deductions to which they are entitled by virtue of required control expenditures, or their effective U. S. income tax rate (T) will be 0.
- An investment tax credit is in effect, and is obtained at the time equipment is purchased.
- For purposes of discounting, operating costs are considered to be paid and corresponding tax savings realized at the beginning of each year. Tax savings from depreciation are realized at the end of each year.
- If equipment is not fully depreciated at the end of the assessment period, it can be sold at a salvage value equal to its economic worth. In that case a portion of the tax credit must be refunded, pro-rated according to the proportion of useful life remaining. (The formula for salvage value is given in the derivations section below.)
- For all purposes other than calculating the depreciation tax deduction, where realistically accelerated depreciation in case by case assessments is used, straight-line depreciation is used.

THE ASSESSMENT FORMULA

Department staff do not have to push their way through the host of calculations required to set out the costs of compliance cash flow, adjust it for tax and inflation, discount to present value, etc. All these calculations are handled automatically by the assessment formula. All the staff need do is put a tape cassette with the formula into a desk calculator and type in a few variables -- and all this work will be done in seconds.

This section explains the formula and its derivation.

Notation

Input variables:

AP = Assessment period, in years.

CC = Annual cost of capital or discount rate, as a decimal fraction.

EL = Expected life of equipment, in years.

DL = Depreciable life of equipment, in years.

CCE = Capital cost of equipment for initial equipment, in dollars.

OP = Operating costs in first year, in dollars.

RI = Annual rate of inflation, as a decimal fraction.

T = Effective marginal U. S. income tax rate, as a decimal fraction. (If there is a state corporate income tax, T would be the total effective tax rate. It would be given by the formula: $T = T_S + (1-T_S)T_F$, where T_S is the state corporate income tax rate and T_F the federal one.)

TC = Investment tax credit rate, as a decimal fraction.

Output variable:

CA = Civil assessment per month, in dollars.

Other variables:

PVO = Net present value of operating costs over the assessment period, net of any tax savings arising from operating costs, in dollars.

PVIE = Net present value of initial equipment, net of any tax credits and savings arising from the purchase and depreciation of this equipment, in dollars.

PVE = Net present value of equipment cost over the entire assessment period (includes the discounted value of initial and replacement equipment, less the value of tax credits and deductions and of any salvage value at the end of the assessment period), in dollars.

A = Amortization factor, giving the amount of the monthly payment required per dollar of present value to be amortized, as a decimal.

Formula

The civil assessment is given by formula (1) below, with the additional variables defined by equations (2) through (5). (These formulae are derived in the following section.)

$$CA = (PVO + PVE)\ A \qquad (1)$$

$$PVO = (1-T)\left(\frac{1 + CC}{CC - RI}\right)\left(1 - \left(\frac{1 + RI}{1 + CC}\right)^{AP}\right) OP \qquad (2)$$

$$PVIE = \left[(1-TC) - \frac{T}{(DL)(CC)}\left(1 - \frac{1}{(1 + CC)^{DL}}\right)\right] CCE \qquad (3)$$

$$PVE = \left[\frac{1 - \left(\frac{1 + RI}{1 + CC}\right)^{AP}}{1 - \left(\frac{1 + RI}{1 + CC}\right)^{EL}}\right] PVIE \qquad (4)$$

$$A = \frac{(1 + CC)^{(1/12)} - 1}{1 - \dfrac{1}{(1 + CC)^{AP}}} \qquad (5)$$

Derivations

CA:

The total present value of compliance costs is the sum of PVO and PVE. The economic assessment is the monthly payment which amortizes this sum over AP years. Hence, the sum is multiplied by the amortization factor, A.

PVO:

We assume that operating costs are paid in the beginning of the year. Each year operating costs increase by an inflation factor of (1 + RI), regardless of the age of equipment then in use. We convert operating costs for year I to a present value by discounting by the factor $1/\ (I + CC)^{I-1}$. Assuming T is the current maximum rate of .48, there is a tax savings of 48 percent of operating costs each year, so net operating costs are .52 of gross operating costs each year.

In general,

$$PVO = \sum_{I=1}^{AP} \left[(1 - T)(OP)(1 + RI)^{I-1}\right] \left[\frac{1}{(1 + CC)^{I-1}}\right]$$

Formula (2) above is an equivalent but explicit formula, derived from the sum of a geometric series.

PVIE:

The cost of initial equipment is CCE. Deducted from this is the tax credit (the variable TC) obtained immediately, and tax savings of the fraction T of allowable depreciation for each year of depreciable life of the equipment. Using straight-line depreciation, annual depreciation is CCE/DL. Depreciation in year I is discounted by the factor $1/(1 + CC)^{I}$. Thus

$$PVIE = CCE - (TC)\ (CCE) - \sum_{I=1}^{DL} T \left(\frac{CCE}{EL}\right) \frac{1}{(1 + CC)^{I}}$$

Formula (3) above is equivalent.

PVE:

The equipment cost of the K^{th} set of replacement equipment (where K = 0 for initial equipment) is equal to the purchase price of the initial equipment times a cumulative inflation factor of

$$(1 + RI)^{K \times EL}.$$

The savings due to the tax credit on replacement equipment and to deductions for depreciation are proportional to equipment cost, and are thus also inflated by the same cumulative inflation factor. Note that all expenditures and savings on this piece of replacement equipment occur (EL) x (K) years further in the future than the corresponding cash flows for the initial equipment purchase. Provided that the entire useful life of the K^{th} replacement equipment lies within the assessment period, its contribution to net present value is

$$\left(\frac{1 + RI}{1 + CC}\right)^{(EL)(K)} PVIE\ .$$

If the assessment period AP is an integral multiple of the equipment life EL, then the useful life of all replacement equipment will be within the assessment period. In that case,

$$PVE = \sum_{K=0}^{(AP/EL)-1} \left(\frac{1 + RI}{1 + CC}\right)^{(EL)(K)} \left(PVIE\right)$$

Formula (4) is equivalent but simpler.

If AP is not an integral multiple of EL, then the last piece of replacement equipment still has a salvage value at the end of the assessment period. We assume that the salvage value is equal to the economic value of the equipment, which is the present value of remaining "services" of this equipment plus the tax savings from any remaining allowable depreciation. If the equipment was purchased in year J and has a remaining lifetime of I years (where I is less than EL) its salvage value is

$$\mathrm{CCE}\ (1 + \mathrm{RI})^{J} \left[\left(\frac{1 - \left(\frac{1 + \mathrm{RI}}{1 + \mathrm{CC}}\right)^{I}}{1 - \left(\frac{1 + \mathrm{RI}}{1 + \mathrm{CC}}\right)^{\mathrm{EL}}} \right) (1 - \mathrm{TC}) + \frac{I}{\mathrm{EL}}\ (\mathrm{TC}) \right]$$

This salvage value is such that the net present value of equipment costs over any period does not depend on what combination of new and used equipment is owned during that period. As a result, equation (4) for PVE holds regardless of whether AP is an integral multiple of EL.

A:

The amortization factor is based on the standard formula for a monthly annuity of unit amount for AP years at an annual interest rate of CC. Since the formula is for monthly payments, the numerator is the monthly cost of capital.

DETERMINING MAXIMUM ASSESSMENTS

For purposes of calculating maximum assessments, we assume the following values: (Note that CA increases with increases in CCE, OP, RI, CC, and AP, and decreases with increases in EL, DL, T and TC.)

* RI = .15 (i.e., 15%). The typical rate of inflation has increased markedly over the last several decades and reached levels not far from 15 percent in 1974.

* CC = .20 (i.e., 20%). Over the long run, the cost of capital has generally exceeded the inflation rate by about 5 percent to provide an adequate return and to compensate investors for inflation.

* AP = 20 years. Twenty years is a common time frame for evaluating many capital projects. Since abatement equipment is auxiliary to production facilities,

it or replacements will have to be used for the lifetime of the underlying plant requiring control if the source is to remain in compliance with the law. Consequently, it is reasonable to assume that sources evaluating a commitment to abatement will think in terms of the common 20-year period. Moreover, a common assessment period helps ensure that assessments are comparable and therefore fair.

* EL = 5 years. Very few significant types of air pollution control equipment have useful lives less than five years long.

* DL = 5 years. Federal tax law allows pollution abatement equipment to be depreciated over a five year period, or over the expected lifetime of the equipment, whichever is shorter.

* T = .48 (i.e., 48%). Although a zero tax rate is possible, and assuming a rate lower than the maximum corporate rate could be defended easily and would increase the assessment maximum significantly, the schedule of maxima used in Sections 602 and 603 assume the 48 percent rate because it is the rate likely to apply in all but a small minority of the cases in which assessments are likely.

* TC = .07 (i.e., 7%). This is the likely rate of the U. S. investment tax credit.

* CCE, OP = maximum figure in range. To obtain the maximum assessment when CCE and OP may assume any value over a specified range, CCE and OP are set at the upper limits of their respective ranges.

An Example: Derivation of a Maximum Assessment

The following computations illustrate the calculation of the civil assessment for the upper left cell in Schedule A of §602(d) of the Air Compliance Civil Assessment Regulations. (This cell is for cases with cost of equipment, CCE = $2500 and annual operating cost, OP = $1000. Other input variables are set at the values specified above.

$$\text{PVO} = .52 \left(\frac{1 + .20}{.20 - .15}\right) \left(1 - \left(\frac{1 + .15}{1 + .20}\right)^{20}\right) 1000 = 7152.23 \qquad \left[\text{by } (2)\right]$$

$$\text{PVIE} = \left[.93 - \frac{.48}{5(.20)} \left(1 - \frac{1}{(1 + .20)^{5}}\right)\right] 2500 = 1607.25 \qquad \left[\text{by } (3)\right]$$

$$\text{PVE} = \left[\frac{1 - \left(\frac{1 + .15}{1 + .20}\right)^{20}}{1 - \left(\frac{1 + .15}{1 + .20}\right)^{5}}\right] (1607.25) = 4806.26 \qquad \left[\text{by } (4)\right]$$

$$\text{A} = \frac{(1 + .20)^{(1/12)} - 1}{1 - \frac{1}{(1+20)^{20}}} = .015719 \qquad \left[\text{by } (5)\right]$$

$$\text{CA} = (7152.23 + 4806.26)\ .015719 = 187.98 \qquad \left[\text{by } (1)\right]$$

In other words, a regulatee required to purchase equipment worth less than $2500 that will cost less than $1000 a year to operate cannot be assessed more than $187.98 a month for failing to control its emissions as required.

SETTING INDIVIDUAL ASSESSMENTS

Individual assessments are determined using the same economics and assessment formula as were used to fix the maximum assessment schedules. However, the Department will utilize current, real values for CCE, OP, EL, DL, RI, T, TC and CC.

* Equipment Costs (CCE) will be based on Department estimates of the installed equipment costs required to bring an uncontrolled source into compliance or on evidence of the actual cost.

* Operating and Maintenance Expenses (OP) will be based on Department estimates of the annual cost of operating and maintaining this equipment properly.

* Equipment Life (EL) is 10 years unless the Commissioner determines otherwise in a correction hearing. He will use reliable tables from, e.g., the U. S. EPA and/or IRS in doing so.

* Depreciable Life (DL) is 5 years unless Federal tax law changes or unless the Commissioner determines that the lifetime of a particular piece of equipment (and therefore its depreciable life) is less than five years.

- The Rate of Inflation (Deflation) (RI) will be valued as an average of recent annual rates based on an appropriate price index.

- The U. S. Income Tax Rate (T) applicable to the source will be assumed to be 48 percent if the source is a corporation (with very limited exceptions) and zero percent if it is a public body or a nonprofit institution. The rate will vary if the source is an individual or partnership.

- The Investment Tax Credit (TC) will be the rate set in the current tax law. (It is now 7 percent.)

- The Cost of Capital (CC) will be set in most cases as the marginal rate obtaining in the industry at the time.

Chapters II - V of Volume II, Part III, explain how to estimate installed capital and annual O&M costs, to adjust for inflation, to take different individual tax rates into account, and to obtain the cost of capital so critical to the formula for Air Compliance cases. Parallel portions of Volumes III and IV explain how to take these steps in Water Compliance and Water Resources cases.

[redacted]

ATTACHMENT D

PUBLIC COMMENT ON ECONOMIC LAW ENFORCEMENT IN CONNECTICUT

This attachment contains representative excerpts from the well over 100 pages of written testimony submitted when the first major set of CEP regulations went to public hearings. A sampling of the associated press coverage follows. (A complete set of these comments and press stories is available in the Department.)

EXCERPTS FROM PUBLIC TESTIMONY ON PROPOSED REGULATIONS

Statements

William J. Baumol, Professor of Economics, Princeton and New York Universities

It is a sensible and economically sound regulatory approach. Its innovative use of objective economic criteria to determine the size of the disincentive necessary to induce compliance in each case ensures that each violator is given an effective incentive while minimizing agency discretion....

I feel that these proposed regulations are designed with a conservative professionalism, balance, and economic rationality....

This formula approximates reasonably the economics of the violator's situation and the assessment level that will be just sufficient (1) to make compliance become economically attractive, and (2) to remove the competitive advantage non-compliance often gives violators vis-a-vis law-abiding companies. It does so in a relatively simple and straightforward way that will be understood by businessmen and that is administratively workable....

It will calculate effective but not excessive assessments....

In every case the potential assessment calculated by the formula would make investing in abatement as attractive as other investments firms in the same business as the company being regulated have recently found commercially attractive.

The regulations would not allow the Department to impose assessments any larger than this economic incentive: in no case can the State charge a business more than is necessary to make compliance with the law as attractive as non-compliance....

It is practical....

It is understandable....

It is predictable....

To my knowledge it represents the first program of its kind to attempt to structure civil assessments on the basis of cost of compliance with environmental standards....

Marvin Chirelstein, Professor of Law, Yale Law School

These regulations...guarantee.../the businessman/ a commercially attractive return on his abatement investment--in the form of saved civil assessments....

This financial "return" removes the chief factor that now discourages prompt compliance.

These regulations also ensure that both the law-abiding majority and the few law-breakers are protected from any possible abuse of discretion by the Department....

The enforcement system these regulations would create would have one more important if less formal safeguard built in. The Department's staff would be forced to think of the cost of compliance whenever it considered taking enforcement action. The staff would, in other words, be required de facto to make an informal "economic impact statement" somewhat analogous in reverse to an environmental impact statement.

I am impressed with the success with which the Department's regulations achieve the dual objectives of effectiveness and fairness. Such success is unfortunately quite rare. And it is, I believe, increasingly important in the regulatory area....

The Department of Environmental Protection's proposed civil penalty regulations breaks important new ground in developing such safeguards. The objective economic basis for assessing penalties they propose is an especially important innovation. It could be used in the very large number of regulatory contexts in which the person subject to regulation must shoulder some cost in order to comply with the law. It is obviously well suited to environmental regulation....

Victor F. Tomasso, Vice President, Tomasso Construction Company

It is to the credit of the Department and the State of Connecticut that the proposed regulations represent a novel and creative alternative to protracted and costly judicial litigation leading to the eventual compliance with the State's environmental protection laws. In large measure, the regulations are directed at the small minority of Connecticut businesses that have, for one reason or another, failed in their responsibility in maintaining a healthy and clean environment....

It is my belief that the administrative assessment of civil penalties being developed in these regulations should and will be applied in other environmental control areas....

Brian Sullivan, Staff Attorney, Connecticut Citizen Action Group

Existing enforcement procedures have required the DEP to rely initially on the Attorney General or local prosecutors plus the courts to impose sanctions on these companies. DEP proceedings have dragged on often for two and one-half years. The new system should decrease enforcement delay and increase its efficiency by permitting penalties to be imposed directly by the DEP subject only to a reviewing function of the courts....

The general experience of the administrative process has been to create the unrealistic threat of large sanctions, but in fact to impose them so infrequently as to negate the deterrent effect.

The new DEP regulations, on the other hand, should permit sure, predictable imposition of penalties....

Richard B. Stewart, Professor of Law, Harvard Law School

...the proposed Connecticut regulations bring an innovative standard to environmental law enforcement by removing the economic incentives to forego the installation of environmental controls....

...I believe that the proposed regulations will have broad remedial effect in encouraging compliance with air quality standards.

The Department's proposals seem to combine maximum enforcement flexibility with limited administrative discretion....

For the Department, environmental law enforcement is made more prompt and efficient by avoiding recourse to costly, time-consuming judicial litigation. For the regulatees, the proposals promise simplicity, certainty, and equity....

Moreover, these regulations protect those regulatees which have complied with air quality standards from unfair competition; the implementation of these regulations will assure a "negative return" to any regulatee who attempts to avoid compliance costs....

D. Daryl Wyckoff, Lecturer in Business Administration, Harvard Business School

The general approach of identifying the level stream of payments which are equivalent to the anti-pollution project cash outflows in net present value terms is both technically justifiable and administratively feasible. Furthermore, it has the effect of applying constant pressure on the manager to comply rather than continue to pollute. This avoids the pitfall of the fine in fact becoming a "license to pollute." If we assume that the enlightened manager makes investment decisions through the accepted "capital budgeting" procedure, then he will consistently select the pollution control alternative....

Andrew J. Gold, Professor of Economics, Director of Urban and Environmental Studies, Trinity College

If you ask an economist what administrative technique to use to get the law enforced the answer would so closely approximate this bill that you could hardly distinguish it from what his own works must be. Put simply, the firm must be placed in a situation where the benefits of compliance exceed the benefits of noncompliance and there is no certain way to do that except by appropriate charges....

There is no other way to guarantee compliance. Anyone familiar with the enforcement of standards in other areas could quickly testify to the impotence of administrative agencies faced with either inadequate penalties or remedies or the necessity of overkill....

The current DEP bill moves then between impotence and overkill in a way that maintains legislative control by specifying in advance the criteria for penalty charges....

In summary, the method of civil penalties calculated as they are in this bill seems like the only rational way to secure enforcement of legislatively defined purposes at a reasonable cost and with due regard for legislative direction....

Thomas Nelson, Professor of Law, University of Connecticut Law School

The current cumbersome, all-or-nothing enforcement procedures available to the Department of Environmental Protection now provide an economic incentive to a firm to attempt to avoid or delay compliance....

Ralph S. Brown, Jr., Professor of Law, Yale Law School

It may be reasonably surmised that the nonconformist is chiefly influenced by the economic advantages that he gains from his failure to comply, when his competitors are in fact complying.

This regulation seeks to remove that improper advantage. It uses the very elements of operating costs and equipment costs that would be taken into account by a calculating wrongdoer, and turns them against him....

In a time when the use of administrative penalties is rapidly expanding, this ingenious proposal which is precisely and measurably related to the shortcomings that it seeks to remedy may have and should have wide influence.

To be sure, your Department is concerned with carrying out its own mission for Connecticut. But it is certainly no discredit that it has produced a way of doing so that seems far superior to existing techniques.

REPRESENTATIVE PRESS COVERAGE OF THE PUBLIC INTRODUCTION OF CONNECTICUT'S ECONOMIC ENFORCEMENT APPROACH

NEW HAVEN REGISTER, FRIDAY, NOVEMBER 15, 1974

Innovative Plan To Fine Air Polluters

Some good features are boasted by the first-in-the-nation method proposed by State officials for penalizing companies that neglect to stop polluting the air. The plan by the Connecticut Department of Environmental Protection (DEP) provides incentive to both the State and the companies to get on with the job of meeting clean-air standards.

Some companies now are getting away with pollution neglect because the State hesitates to crack down on them. If present tough penalties were invoked, many firms would be forced out of business. Right now there are 10,000 pollution sources registered with the DEP. With the State reluctant to do itself economic damage by losing business and industry, the harsh penalties are not aggressively enforced.

The proposed new regulations for imposing civil penalties might yield results without crushing companies. Instead of the stringent approach, which too often is unusable, the DEP would take the financial advantage out of pollution.

Under the innovative system, the size of a penalty, to be imposed on a monthly basis, would be determined by estimating the cost of acquiring anti-pollution equipment needed by the firm and the cost of maintaining it. Then the State would figure the amount of return the compnay could count on if it invested that amount of money instead of putting it toward anti-pollution devices. That's what the firm would be charged.

There is an element of fairness to the plan that makes it worth considering. It would eliminate the competitive edge that some firms gain by refusing to invest in anti-pollution equipment. Right now, many companies that have spent money to fight air pollution have done so at a disadvantage if competing firms fail to comply with standards.

The formula proposed seems to be a realistic approach that would allow the State to take an aggressive anti-pollution stance without undermining the State's economy.

NORWICH BULLETIN, WEDNESDAY, NOVEMBER 13, 1974

DEP Considers Plan To Fine Polluters

By KELLY ANTHONY

NORWICH — The State Department of Environmental Protection (DEP) will begin to tighten its reign on air polluters refusing to obey clean air laws, by reviewing a proposed set of regulations to fine violators who are escaping through loopholes and delaying tactics.

The public hearing for Eastern Connecticut is slated for tonight in Norwich City Hall at 7:30, and is one of four regional hearings being held throughout the state this week by DEP.

Industrial polluters which formerly gained an economical advantage over their competitors by failing to comply with the law will now be subject to fines. Under The Enforcement Act of 1973, the General Assembly has authorized DEP to assess fines to offset the savings some industries realized by not installing pollution control devices.

When the new regulations are adopted in their final form, it will speed up the enforcement process to make the cost of complying with the law less expensive than not complying, a spokesman said.

Under the new regulations, once DEP had issued a notice of violation, citing both the violation and a proposed assessment which is derived from a complex formula, the polluter would have 20 days to comply or appeal.

Any hearing must then be conducted by the commissioner or deputy commissioner personally, or by a hearing officer from the Office of Adjudication, a separate DEP board. Upon final consideration, a decision could include a reduced assessment or no assessment. The violator would also have the right of appeal to Hartford Superior Court.

Existing state and federal air pollution control laws, even entirely disregarding the Enforcement Act, subject violators to injunctions, money penalties up to $180,000 a week, and, in some cases, imprisonment.

In contrast, the Enforcement Act only authorizes assessments which would match the savings of non-compliance, and no proposed total assessment could exceed $25,000, plus $1,000 a day once a violator was placed under a final order. DEP, however, would inherit the initial enforcement responsibility instead of the Attorney General's office.

Richard B. Stewart, assistant professor of law at Harvard, called Connecticut's regulations "an innovative standard to environemnntal law enforcement by removing the economic incentives to forego the installation of environmental controls."

Former DEP head Dan Lufkin also testified that "these regulations go a long way to protect environmentally responsible businesses from irresponsible competitors and, at the same time, bring flagrant polluters into compliance."

Marvin Chirelstein, a law professor at Yale and an expert in areas of corporate and tax law, referred to the regulations as a "realistic set of economic criteria," but noted the difficulty of determining the exact cost of capital would invite litigation and suggested other "tightening" procedures, all of a minor nature.

NEW HAVEN JOURNAL COURIER, WEDNESDAY, NOVEMBER 13, 1974

DEP Wants Polluters Fined Amount Saved By Ignoring Rules

HARTFORD (AP) — The Connecticut Department of Environmental Protection wants to fine polluters the same amount of money they are saving by ignoring air-emission standards.

The DEP is proposing regulations that would allow it to assess civil penalties on companies that avoid complying with state pollution standards. The penalty charged each polluter would be the amount the firm would get if it invested the money needed to meet the standards.

Andrew Weissman, an attorney who helped draft the proposed regulations, said Tuesday that Connecticut is the first state to try to eliminate the economic advantage of ignoring pollution standards.

Weissman said at a press briefing that present penalties are ineffective because they are so harsh they are unusable.

He said state and federal fines now total $180,000 a week and court orders to halt pollution simply would force a company out of business.

The 1973 General Assembly authorized the department to assess civil penalties to avoid the courts and fashion the punishment to fit the circumstance of each firm found in violation.

Here is how the new regulations would work:

A company found in violation would be sent a warning letter giving it 90 days to submit a reasonable plan for ending the pollution. If that condition were not met, the firm would be assessed the penalty for each month it has been in violation, up to a maximum of two years.

The size of the monthly penalty would be determined by estimating the cost of adding the needed emission control equipment and maintaining it, figuring the amount of return the company would get if it invested that money instead of putting it toward anti-pollution devices and charging the company a penalty equal to the interest it could have earned.

Weissman said that formula would eliminate any advantage to the firm to avoid investing in emmission controls. He said some firms have had an unfair advantage by ignoring the law while their competitors have voluntarily complied.

He said 10,000 pollution sources are registered with the department.

This A.P. story was carried in most state papers.

NEW LONDON DAY, TUESDAY, OCTOBER 22, 1974

Pollution penalty proposed

NEW HAVEN — Proposed civil penalties, designed to make it uneconomical for businesses and industry to pollute the air, were outlined for members of the Connecticut Bar Association Monday by officials from the state Department of Environmental Protection.

The explanation came during one of several seminars conducted at the bar association's 99th annual meeting here.

The proposed penalties, which include fines of up to $25,000 per day for failure to comply with state pollution control orders, were created by the DEP to carry out the mandate of the Environmental Enforcement Act passed by the state legislature in 1973.

A public hearing on the proposed penalties has been scheduled for November in Hartford.

The purpose of the act, Atty. William Drayton, Jr., a DEP consultant from New York said, is to give all the environmental statutes on the books now a uniform procedure for enforcement.

In the past, Drayton said, the department has been hampered by the inability to distinguish between major and minor infractions of the law there was no such uniform procedure.

The procedure will also help the DEP act more quickly against violations, Drayton said. Violators who delay in installing polution-control equipment will be fined severely, he said, while violators who act promptly will face no penalties.

In the past, he said, the situation has been such that at times it made more sense for a businessman to delay in the installation of equipment than to take action right away.

Because there was no uniform procedure, Drayton said, a violator previously could put off correction of the problem without facing any severe penalty

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MANCHESTER HERALD,

WEDNESDAY, NOVEMBER 13, 1974

Citizen Group Backs Fines for Polluters

HARTFORD (UPI) — The Connecticut Citizen Action Group is backing new fines against polluters by the state Department of Environmental Protection.

In testimony prepared for delivery before the DEP today, CCAG attorney [illegible] Sullivan backed regulations to allow for better enforcement of existing laws by the DEP.

Sullivan said the new regulations would permit the DEP to impose penalties directly, instead of going through the attorney general or local authorities as it must now do.

The fines are calculated on the basis of the cost a business would have incurred in complying with the air standards in the first place, Sullivan said. Thus, the fine for a polluting factory would be what the business would have spent if it had installed antipollution equipment.

Story carried in many other state papers.

HARTFORD TIMES, SATURDAY, NOVEMBER 16, 1974

State Industries Snub Hearing on Pollution

By DICK ANTHONY
Staff Reporter

The one group with the most direct stake in the state's proposed system of air pollution fines — Connecticut's industrial community — was virtually unrepresented at the Hartford hearing on the proposal.

The only company that sent a spokesman to the Hearing this week was Northeast Utilities.

Meanwhile, environmental groups, along with some professors from colleges and universities in the state, dominated the hearing.

Although a few of these speakers had minor questions about the proposals, most felt they are generally sound.

One environmentalist who had serious reservation about the proposed rules was Barbara Bass. She represented the Air Conservation Committee, part of the Connecticut Lung Association.

She said that while the proposed rules focus on getting companies to obey air pollution laws, they don't deal with the problem of ensuring that potential polluters register with the Department of Environmental Protection (DEP).

"There are many sources (companies) who are unregistered. there are many sources which are not in compliance," she asserted.

Deputy DEP Commissioner Eckhardt C. Beck responded that the proposed regulations on fines aren't meant to cover the problem of registrations.

That would require a different set of regulations, he told her.

The spokesman for Northeast Utilities, Atty. Robert Knickerbocker, told the hearing panel the rules don't deal with the fact that companies may have varying reasons for not obeying anti-pollution laws.

The rules, however, are written with the assumption that polluters violating the law simply want to have an economic advantage over competing firms.

Another speaker, however, said the focus on the issue of competitive advantages is correct.

Prof. Ralph S. Brown Jr. of Yale University Law School argued that companies who oppose the rules because of "sincere differences" with the DEP about air pollution standards should make their feelings known before the rules are adopted.

If they don't, he went on, it's reasonable to assume they are chiefly influenced by the economic advantages" to be gained from failure to comply.

The proposed rules, called civil penalities, have been designed so that polluters will be fined exactly the amount they save by not installing anti-pollution equipment.

The rules also provide for periods of negotiation, and for appeals, however. Thus firms would be given ample opportunity to comply before would have start paying fines.

HARTFORD TIMES,

SATURDAY,

NOVEMBER 16, 1974

New Britain Builder Backs Pollution Penalty Proposals

By GERALD J. DEMEUSY

A New Britain construction official said Saturday civil penalty regulations proposed by the Department of Environmental Protection (DEP) effectively will check the pollution of air by a minority of Connecticut industry.

Victor F. Tomasso, vice president of Angelo Tomasso Inc., cautioned, however, that the regulations must be carefully drafted to avoid confusing language that might leave loopholes for deliberate polluters.

Deputy DEP Commissioner Eckardt C. Beck said the regulations will be sent to the office of the attorney general for review after "a few minor technical revisions are made." He said the regulations were endorsed by economists, educators and environmentalists during a series of public hearings last week.

Called 'Creative'

Tomasso said his firm favors the proposed regulations as "a novel and creative" method of dealing with industries which are dragging their feet in complying with requirements of the Clean Air Act.

The regulations, which would implement the Connecticut Enforcement Act passed by the 1973 General Assembly, empower DEP to assess fines against firms which ignore compliance orders. The amount of the fine would not exceed the cost of installing pollution abatement devices.

Tomasso predicted the civil penalty regulations to deal with air polluters will establish, a precedent for controlling other environmental problems in the same way. That's why, he said, it's important to make the regulations as clear and simple as possible.

He said it would be "ironic" if the language of the regulations aimed at ending the time consuming and expensive procedure of hailing polluters into court-was so ambiguous and unclear that businessmen would have to hire a lawyer to interpret the terms.

Beck 'Convinced'

"Testimony presented at last week's public hearings has convinced me that the regulations fulfill the legislature's intent in closing the loopholes in our clean air laws, and at the same time safeguarding responsible firms from undue government regulation," said Beck.

The regulations provide for appeal to the courts in cases where those who are fined disagree with findings of the DEP.

Architect of the 1973 legislative act, former state DEP Commissioner Dan W. Lufkin, went on record in favor of the regulations. He said they establish a system of fines "that exactly equals the illegal profits which flagrant polluters make by not complying with the law."

BRIDGEPORT TELEGRAM, WEDNESDAY, NOVEMBER 13, 1974

DEP Plan to Stiffen Air Rules Praised at City Hall Hearing

A state Department of Environmental Protection proposal aimed at eliminating the economic advantages of violating air pollution control standards drew praise and only minor criticism at a sparsely attended public hearing in City Hall last night.

The proposal, in the form of administrative regulations, would give the DEP the right to levy fines of up to $25,000 initially plus $1,000 per day for continuing violators of air standards.

The exact amount of the fines would be equal to the money saved by the recalcitrant company by not installing and maintaining pollution control equipment.

Under present regulations, violators face money penalties of up to $180,000 a week or in some cases imprisonment. But in order to have the penalties assessed, the department must go to court.

According to DEP spokesmen, judges were unwilling to enforce the harsh standards and violators were able to avoid complying with the law.

Muriel Lightfoot of the state League of Women Voters, one of five persons who testified last night, praised the proposed regulations, saying the time has come for companies to realize that "pollution control should be considered a cost of doing business."

Joan Jobson, of Conservationists of Stamford, a 200-member private environmental group, also hailed the regulations, but suggested that they be amended to require the DEP to individually notify persons directly affected by violators of an upcoming hearing on the violator's case.

William L. Hawkins, executive vice president of the Bridgeport Area Chamber of Commerce, said that private industry had already shown "a great response" to air pollution standards and criticized area municipalities for their smoky incinerators.

Lufkin Praises Plan

The proposed regulations were also praised by former Environmental Protection Commissioner Dan W. Lufkin, who was in charge of the DEP in 1973, when the regulations were first conceived. Mr. Lukin, who resigned to return to his Wall Street investment firm, delivered a statement through a spokesman saying the regulations would "go a long way to protect environmentally responsible business from irresponsible competitors and bring flagrant polluters into compliance."

The one other dissenting note at the hearing came from Peter Alagna, who heads the Stamford Air Pollution Control bureau and formerly worked in Bridgeport's Air Compliance unit.

Mr. Alagna claimed that the proposed regulations would "short circuit" due-process controls by giving the DEP the right to levy fines without going to court. He recommended that the regulations be restricted in application to areas where air quality threatened health standards.

DEP officials say the proposed regulations are the first in the nation to attempt to calculate pollution fines through the economic advantages of non-compliance. David Tundermann, of the DEP, said last night the proposed regulations were aimed at a small percentage of violators that are responsible for the bulk of compliance delays.

He said that of the 10,000 potential pollution sources registered with the state, 3,750 have been inspected and 1,350 of these were found to be in violation. All but 287 companies corrected their problems without a DEP order, he said.

Half of the 287 cleared corrected their violations according to DEP timetables, he said, but the rest delayed. A total of 21 violators were responsible for three-quarters of the delayed compliance time accumulated since June of 1972, he said.

Mr. Tundermann, who along with Deputy Environmental Protection Commissioner Eckardt C. Beck conducted the hearing, said the regulations could go into effect by January. They first must be approved by the legislature's Regulation Review committee, however.

Procedures Outlined

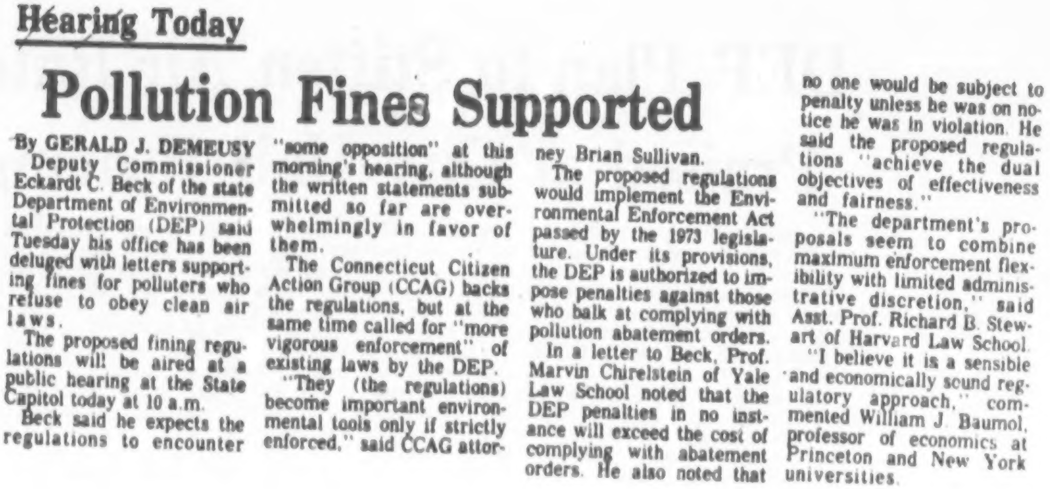
If they are approved, the following procedure would be established:

A company found in violation would be sent a warning letter giving it 90 days to submit a reasonable plan for ending the pollution. If that condition were not met, the firm would be assessed the penalty for each month it had been in violation, up to a maximum of two years.

The size of the penalty would be determined by estimating the cost of acquiring and operating the necessary pollution control equipment, determining the savings and company has realized by not putting the equipment in, and converting this to a monthly fine.

The fine could be contested in court, according to Mr. Tundermann.

THE HARTFORD COURANT, WEDNESDAY, NOVEMBER 13, 1974



Hearing Today

Pollution Fines Supported

By GERALD J. DEMEUSY

Deputy Commissioner Eckardt C. Beck of the state Department of Environmental Protection (DEP) said Tuesday his office has been deluged with letters supporting fines for polluters who refuse to obey clean air laws.

The proposed fining regulations will be aired at a public hearing at the State Capitol today at 10 a.m.

Beck said he expects the regulations to encounter "some opposition" at this morning's hearing, although the written statements submitted so far are overwhelmingly in favor of them.

The Connecticut Citizen Action Group (CCAG) backs the regulations, but at the same time called for "more vigorous enforcement" of existing laws by the DEP.

"They (the regulations) become important environmental tools only if strictly enforced," said CCAG attorney Brian Sullivan.

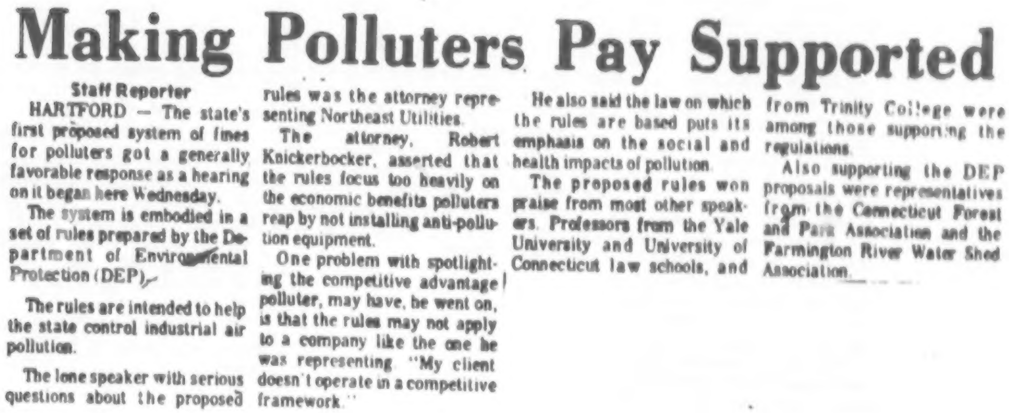
The proposed regulations would implement the Environmental Enforcement Act passed by the 1973 legislature. Under its provisions, the DEP is authorized to impose penalties against those who balk at complying with pollution abatement orders.

In a letter to Beck, Prof. Marvin Chirelstein of Yale Law School noted that the DEP penalties in no instance will exceed the cost of complying with abatement orders. He also noted that no one would be subject to penalty unless he was on notice he was in violation. He said the proposed regulations "achieve the dual objectives of effectiveness and fairness."

"The department's proposals seem to combine maximum enforcement flexibility with limited administrative discretion," said Asst. Prof. Richard B. Stewart of Harvard Law School.

"I believe it is a sensible and economically sound regulatory approach," commented William J. Baumol, professor of economics at Princeton and New York universities.

NEW HAVEN JOURNAL COURIER, THURSDAY, NOVEMBER 14, 1974



Making Polluters Pay Supported

Staff Reporter

HARTFORD — The state's first proposed system of fines for polluters got a generally favorable response as a hearing on it began here Wednesday.

The system is embodied in a set of rules prepared by the Department of Environmental Protection (DEP).

The rules are intended to help the state control industrial air pollution.

The lone speaker with serious questions about the proposed rules was the attorney representing Northeast Utilities.

The attorney, Robert Knickerbocker, asserted that the rules focus too heavily on the economic benefits polluters reap by not installing anti-pollution equipment.

One problem with spotlighting the competitive advantage polluter, may have, he went on, is that the rules may not apply to a company like the one he was representing. "My client doesn't operate in a competitive framework."

He also said the law on which the rules are based puts its emphasis on the social and health impacts of pollution.

The proposed rules won praise from most other speakers. Professors from the Yale University and University of Connecticut law schools, and from Trinity College were among those supporting the regulations.

Also supporting the DEP proposals were representatives from the Connecticut Forest and Park Association and the Farmington River Water Shed Association.

WATERBURY AMERICAN, THURSDAY, NOVEMBER 14, 1974

Stiff Air Pollution Fine Plan Favored

The Department of Environmental Protection held a public hearing in Waterbury Wednesday night on proposed regulations for air polluters that would make it as expensive to violate the law as it would be to install anti-pollution equipment.

Proposed DEP regulations would allow the agency to assess civil penalties on companies that avoid compliance with state pollution standards.

The proposals were favored by four people and opposed by one at a public hearing in Aldermanic Chambers.

Two additional speakers, making a total of seven, did not register for or against but merely asked questions about the proposal.

The hearing, conducted by David Tundermann, assistant commissioner and DEP consultant, William Drayton, was attended by only one Waterbury firm, Sherwood Medical Industries.

Uniroyal representatives were present, but did not speak.

The penalty charged each polluter would be the amount the firm would get if it invested the money needed to meet the standards.

DEP considers present penalities ineffective because they are so harsh they are unusable. DEP said state and federal fines now total $180,000 a week and court orders to halt pollution simply would force a company out of business, something the DEP and the courts have been unwilling to do.

The new regulations, authorized by the 1973 General Assembly, are designed to eliminate economic incentive to violate and to protect those who have complied from unfair economic advantage.

The only opponent at Wednesday night's hearing was Atty. Robert H. Hall of Newtown, a lawyer who represents alleged violators but who said he was speaking only for himself.

Hall contended the proposed regulations enable DEP to impose penalities on a mere claim of violation without resorting to a court to determine the validity of the claim.

Hall also contended that if the violation is mild or intermittent and the cost of abating it is "astronomical," a penalty based on the cost of the equipment would not be in proportion to the violation.

Michael Michalak of Sherwood Medical Industries had no comment for or against the regulations, but said his company is having trouble meeting the standards. He said Sherwood has contacted 11 different anti-pollution equipment firms and has spent $17,000 on a system "that wasn't worth a penny."

Michalak wanted to know how much flexibility the new regulations have for dealing with a situation similiar to Sherwood's, adding that DEP inspectors he has dealt with so far have been inflexible. He said they have demanded compliance without concern for the nature of Sherwood's operation or for the problems the company has encountered in trying to achieve compliance.

Tundermann said as long as a company is making "a reasonable effort" to comply, it is immune from penalty.

Wilfred Swan of Beacon Falls also had no comment for or against the proposed regulations, but wanted to know whether they provide for publication of the identity of violators. He was referred to a DEP publication which he was told would be sent to him if he called DEP offices in Hartford.

Two of the four people in favor addressed the hearing by proxy. Tundermann read a statement from former DEP commissioner, Dan W. Lufkin and James Vickery read a statement from Prof. William Baumol of Princeton University.

After reviewing the provisions of the regulations, Lufkin's statement concluded, "I think these regulations go a long way to protect environmentally responsible business from irresponsible competitors and, at the same time, bring flagrant polluters into compliance. I urge the adoption of these regulations."

Prof. Baumol's statement said, in part, the proposed regulations provide "an effective incentive while minimizing agency discretion...(they) make compliance attractive and remove the competitive advantage. . . This is the first program of its kind. I urge its adoption and am looking for ward to its implementation."

Also speaking in favor were William F. Morrill, executive director of the Berkshire-Litchfield Environmental Council, and Dennis Arnold of the Yale Legislative Services.

The hearings will resume tonight at 7:30 in Norwich.

A hearing on the proposed regulations in Bridgeport Tuesday night was attended by six persons. Lufkin's statement there said the regulations would eliminate a situation in which "flagrant violators were able to drag their feet and the department through the courts knowing that in the end they would receive token penalties."

Muriel Lightfoot of Westport, representing the League of Women Voters, testified that the time had come for private companies to realize that "pollution control should be considered a cost of doing business."

The Connecticut Citizen Action Group called the regulations in a release a "new step for environmental protection in Connecticut."

THE HARTFORD COURANT, WEDNESDAY, JULY 30, 1975

Hearings Set on Fines For Wetlands Violators

Public hearings will be held in September on proposed regulations to let the state Department of Environmental Protection (DEP) fine persons who tamper with coastal wetlands without first getting a permit.

Authority to impose fines would be conferred on DEP Commissioner Joseph N. Gill, although violators would have the right of court appeal.

Two years ago, the legislature enacted the so-called civil penalties act which enables the DEP to adopt regulations to deal swiftly with polluters. The proposed regulations would broaden this authority to levy fines against wetlands law violators.

Gill said he fears continued encroachment of wetlands. Those who fill in low-lying areas cause "irreversible" damage to the ecosystem, he said. He estimated that as many as 14 illegal fills are made each year.

The hearings will be Sept. 9 at 7 p.m. at New London City Hall; Sept. 10 at 7 p.m. at the New Haven Hall of Records, and Sept. 11 at 7 p.m. at Cloonan Middle School in Stamford.

NEW LONDON DAY,

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Filling penalties plan draws no criticism

NEW LONDON — No objections were voiced at a public hearing in City Hall Tuesday night on proposed new state regulations providing for heavy fines against institutions that fill in coastal areas without permits.

The hearing was conducted by the state Department of Environmental Protection (DEP), which will enforce the new regulations.

The only substantial testimony came from Merritt Cosgrove, a New London attorney and a former DEP employe who helped draw up the regulations. Cosgrove praised the proposal.

The new regulations would add teeth to a 12-year-old state law that prohibits the filling of any area seaward of mean high tide without a state permit.

The procedures now in effect require the DEP to take all accused violators to court before a fine is levied.

DEP spokesmen argue that court delays of up to two and a half years are cumbersome and encourage potential violators to think they can get away with unpermitted filling.

The new regulations allow the DEP to levy a fine when it determines an illegal fill has taken place. The institution would then have to take the case to court in order to appeal the fine.

The fines would range up to $885 for not seeking a permit before filling and up to $1,000 a day for refusing to remove illegal fill.

The fines would apply only to institutions and not to individuals. DEP figures show nearly 90 per cent of all the illegal filling has traditionally been done by institutions.